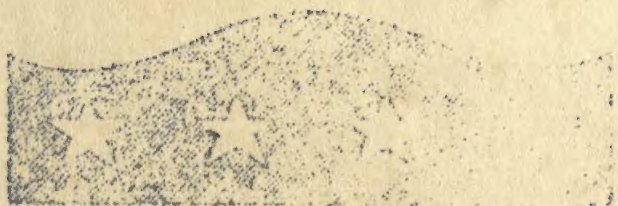


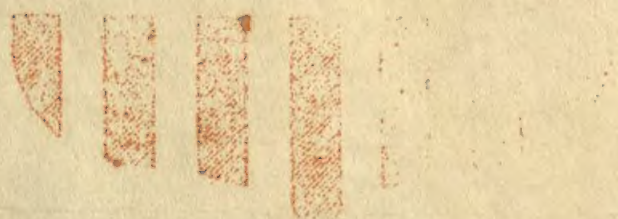
97.11.16

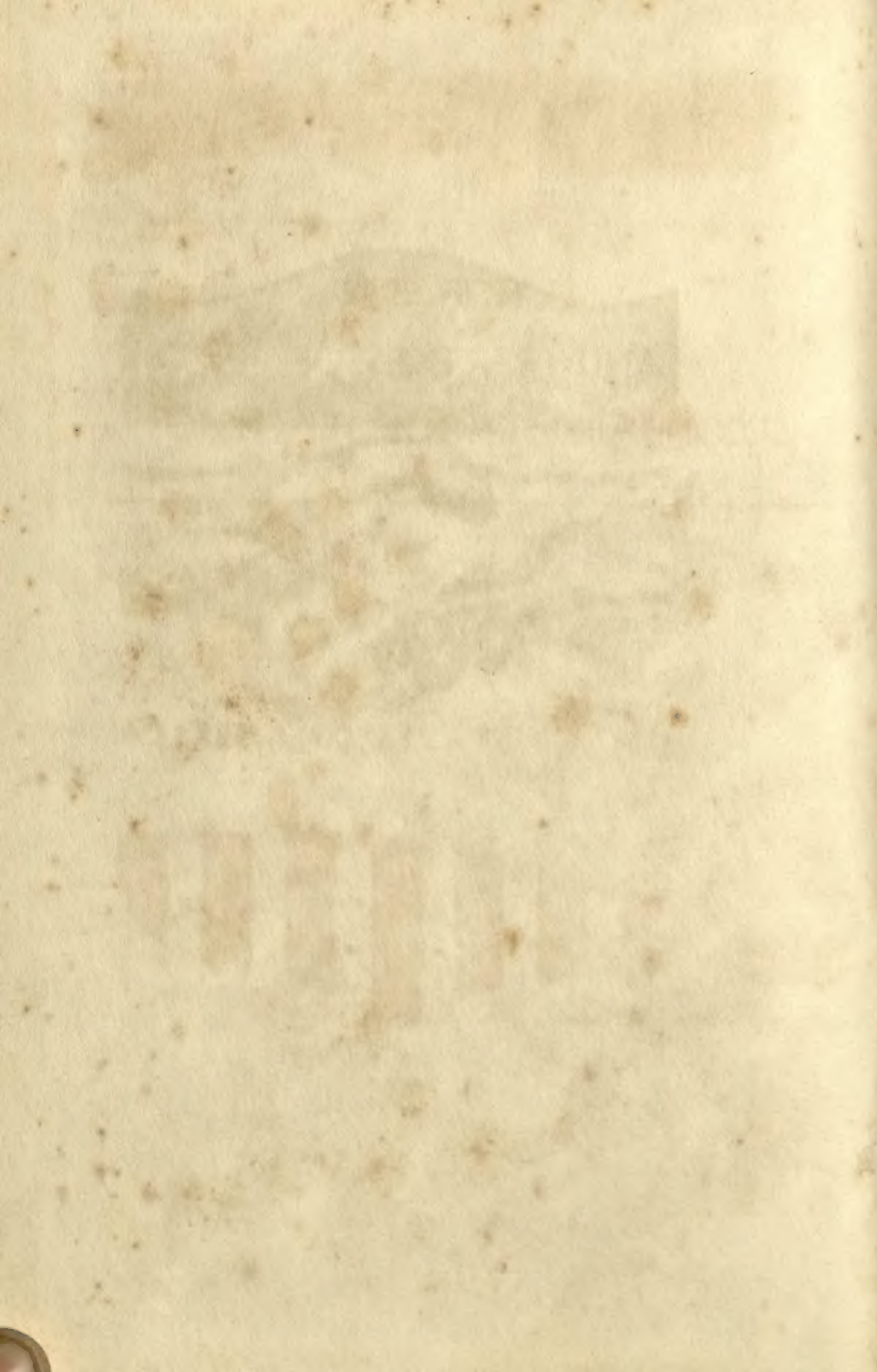


370.73
Klaus



AD 13 MA 40 1111





.....

**PRINCIPLES
AND PRACTICES OF
SECONDARY SCHOOL TEACHING**

—————



EXPLORATION SERIES IN EDUCATION

...

Under the Advisory Editorship of

JOHN GUY FOWLKES

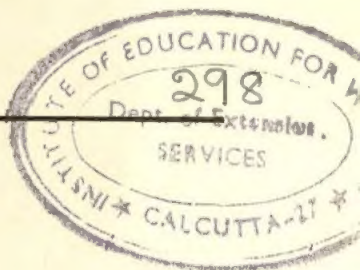
Principles and Practices of Secondary School Teaching

HERBERT J. KLAUSMEIER

SCHOOL OF EDUCATION
THE UNIVERSITY OF WISCONSIN



HARPER & BROTHERS, PUBLISHERS
NEW YORK



370.73
Klaus

PRINCIPLES AND PRACTICES
OF SECONDARY SCHOOL TEACHING

Copyright, 1953, by Harper & Brothers

Printed in the United States of America

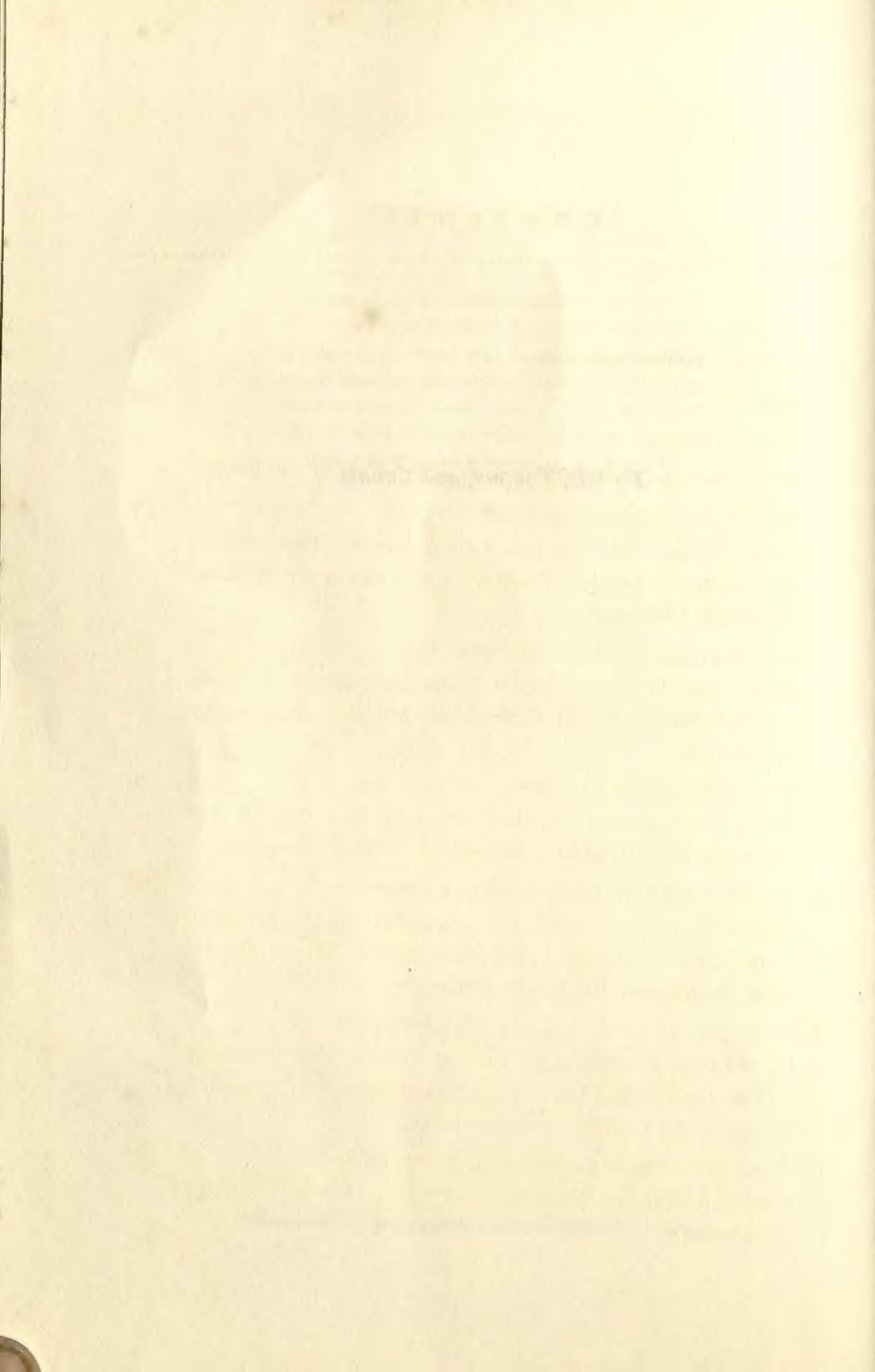
All rights in this book are reserved.

*No part of the book may be used or reproduced
in any manner whatsoever without written per-
mission except in the case of brief quotations
embodied in critical articles and reviews. For
information address Harper & Brothers
49 East 33rd Street, New York 16, N.Y.*

B-F

Library of Congress catalog card number: 52-11441

To Iyla, Tommy, and Connie



C O N T E N T S

| | |
|--|------|
| EDITOR'S INTRODUCTION | xi |
| PREFACE | xiii |
| INTRODUCTION | 1 |
| Six Challenges to Secondary Teachers—Plan of the Book | |
| 1. THE GOALS OF SECONDARY EDUCATION | 11 |
| Social Change and the Goals of Secondary Education— Statements of Goals—Teaching Competence to Achieve the Goals—Summary | |
| 2. THE NATURE OF ADOLESCENTS | 39 |
| Interpreting Human Behavior—The Developmental Tasks of Adolescence—Initial Methods for Studying Adolescents —Summary | |
| 3. THE NATURE OF LEARNING | 70 |
| What Is Learning?—Factors Affecting Learning—Proce- dures for Investigating Classroom Learning—Summary | |
| 4. THE NATURE OF DEMOCRATIC LIVING | 104 |
| The Ideals of Democratic Living—Achieving the Ideals of Democracy—Studying Community Forces Which Imple- ment Democratic Ideals—Summary | |
| 5. THE NATURE OF SECONDARY CURRICULUM | 135 |
| Curriculum Terminology—Course Patterns and Proposals —The Teacher and Curriculum Construction—Methods for Investigating Curriculum—Summary | |
| 6. PLANNING FOR CLASSROOM INSTRUCTION | 168 |
| Overall Planning—Unit Planning—Daily Lesson Planning —Summary | |

| | |
|--|-----|
| 7. ORGANIZING AND DIRECTING INITIATORY ACTIVITIES | 197 |
| Coöperative Student-Teacher Activities—Teacher-Oriented Activities—Summary | |
| 8. ORGANIZING AND DIRECTING DEVELOPMENTAL AND CULMINATING ACTIVITIES | 225 |
| Implementing the Developmental Sequence of Learning—Building Understandings—Building Skills—Building Attitudes—Developmental and Culminating Activities in a Core Class—Three Problems Related to the Developmental Sequence—Summary | |
| 9. CONDUCTING INDIVIDUAL AND GROUP WORK | 256 |
| Perspective in Use of Individual and Group Work—Types of Individual Work—Types of Group Activities—Summary | |
| 10. USING INSTRUCTIONAL MATERIALS EFFECTIVELY | 290 |
| Reading Materials—Motion-Picture and Other Visual Aids—Auditory Aids—Summary | |
| 11. BUILDING EFFECTIVE STUDY AND WORK METHODS | 323 |
| Appraisal of Factors Which Affect Study Methods—Study Methods in Reading—Problems of the Slow and Fast Learner—Summary | |
| 12. DEVELOPING CREATIVITY AND AESTHETIC APPRECIATION | 349 |
| Factors Related to Creativity and Appreciation—The Visual Arts Program—The Music Program—The Language Arts Program—Summary | |
| 13. BUILDING MORALE AND MAINTAINING CLASSROOM DISCIPLINE | 375 |
| The Mental Hygiene Viewpoint Toward Discipline—Classroom Climate and Discipline—Punishment and Classroom Morale—Remedial Procedures—Summary | |
| 14. GUIDANCE SERVICES AND CLASSROOM INSTRUCTION | 410 |
| The Specialist and Guidance Services—The Teacher and Guidance Services—Summary | |

| | |
|---|-----|
| 15. EVALUATION AND CLASSROOM INSTRUCTION | 443 |
| Essential Features of an Evaluation Program—Standardized Tests in Evaluation—Teacher-Made Tests in Evaluation— Informal Techniques of Evaluation—Interpreting Test Data —Summary | |
| 16. RECURRENT PROBLEMS OF TEACHING | 477 |
| APPENDIX A: INSTRUCTIONAL FILMS | 491 |
| APPENDIX B: RESOURCE UNIT IN HEALTH—TUBERCU- LOSIS | 499 |
| INDEX | 509 |



EDITOR'S INTRODUCTION

The two related questions of how to learn and how to teach have long occupied the attention of all who are interested in schools. Many aspects of these questions remain unanswered. Some general consensus, however, has been reached on the following points.

1. Method or process is important at all levels of educational development. Few would contend today that method is less important in the high school or the college than it is in the elementary school.

2. Teachers need as much skill as possible in many kinds of procedures. There is no one universal teaching method; there are methods which are appropriate to the attainment of particular objectives, to the needs of certain students, and to the circumstances of various teaching-learning situations. A given teacher of course will do some things better than others, but he strives to improve his use of many kinds of procedures and materials, including, for example, discussion techniques, lecturing, audio-visual aids, community resources, group planning, and project work.

3. Method is not merely the *how*, but also part of the *what* of education. In one sense, method is the handmaiden of content, but it is also much more than that. It contributes to the attainment of some of the most important objectives of schooling. The reason for using discussion techniques is not only to facilitate the learning of the content under discussion, but also to help students learn the skills and processes involved in the oral interchange of ideas. Teacher-student planning is employed not only to arrive at a better selection of content, but also to offer opportunities to practice coöperative decision-making, one of the most necessary citizenship skills. Provisions made for individual differences in students serve not only the attainment of content learnings, but also underwrite in daily teaching practice the basic principle that schools exist to serve unique human individuals.

This book has been written from the standpoint of these major points of consensus. In the first place, the author in directing his attention to the secondary school emphasizes the fact that method is fully as important at that level as it is at other levels of schooling. He develops the problem of secondary school teaching procedures in relation to what is known about the growth characteristics of youth and to the demands which youth must meet in today's world.

Likewise, the author recognizes that there are many kinds of teaching and learning procedures and that the choice of these procedures under varying circumstances is not an easy one to make. He presents in concrete form a variety of teaching-learning situations and shows how principles of learning may be applied to the making of wise choices. He offers the beginning teacher helps not in mastering "tricks of the trade" but in developing skills along many lines of teaching practice.

Most important of all, the reader will find in this book a tangible relationship between teaching practices on one hand and the functions of secondary education on the other. The author presents the practices squarely within the context of the purposes for which the American people establish and maintain high schools. Teaching procedures are shown as some of the direct means which schools may employ to help youth develop to their fullest extent as individuals and to assume their citizenship responsibilities in American life.

The title of this book therefore takes on particular significance. This is not merely a book on the principles of secondary education, nor is it just a book on teaching practice. It is a book which deals positively with the vital connection between the principles and the practices of secondary school teaching. As such, it offers constructive guidelines to those who are preparing themselves for the challenging privilege of helping high school youth achieve their learning objectives.

JOHN GUY FOWLKES

P R E F A C E

Professional instruction is the most important service provided to American youth by organized society. Teachers exercise more influence on the course of individual and group life than does any other group of individuals, except parents. Under the leadership of professional teachers, boys and girls develop the understandings, skills, and attitudes which are necessary to adjust in a rapidly changing world. It is through education that youth learn to control the direction of change for the progress of mankind and to become self-directed citizens of a democracy. Self-direction and socially acceptable participation in a democratic life are learned ways of behaving. Every high school teacher must assume a due share of responsibility for providing instruction and leadership in the classroom and in out-of-class activities to achieve these learnings. Professionalism in teaching is required.

During the first half of this century the teaching profession has had opportunity to profit from all previous recorded experiences of the human race. During the past fifty years more has been learned concerning human growth and development, learning, democratic living, the curriculum, classroom instruction, and professional relationships than in all our previous history. The translation of this vast and profound information into classroom practice constitutes the major challenge to teaching. Enough is now known to achieve a professionalism in teaching heretofore unrealized in our history. We must integrate the valuable experiences of previous generations into our daily classroom practice. Youth must be assisted in setting and achieving goals in harmony with their potentiality for individual and group life.

This book is addressed to those concerned with educating youth, especially teachers and prospective teachers. Teaching requires an integration of understandings and skills drawn from many sources. A

psychologically and socially sound developmental sequence in teaching is emerging. This book is organized according to the author's concept of such sequence but is necessarily divided into sections: (1) the foundations of professional teaching (Chapters 1-5); (2) organizing and directing learning activities (Chapters 6-8); (3) methods of classroom instruction (Chapters 9-12); and (4) classroom discipline, guidance, and evaluation (Chapters 13-16). The author believes that there is no basic division among the sections; rather, all exist as a unified whole with a common purpose—better teaching in the classroom.

In each section, problems of professional teaching are stated and discussed. Many of these have originated in teaching students in Indiana high schools; in working with student teachers, supervising teachers, and principals of the junior and senior high schools in the Stanford University and San Francisco area; and in working with graduate and undergraduate students in education at Stanford University, San Francisco State College, and Colorado State College of Education.

Tentative answers to most problems are proposed in the hope that they will be considered as such and that teachers and others will follow democratic methods of group discussion, scientific experimentation, and problem-solving techniques to find solutions acceptable to themselves.

ACKNOWLEDGMENTS

Whatever a person writes results from his experiences; therefore, I want to express appreciation to some of the many individuals who have helped me formulate the ideas which are incorporated in this book. Professors at Stanford University, 1947-1949, especially Lucien B. Kinney, Ernest R. Hilgard, I. James Quillen, Lawrence Thomas, Frank Gillette, Lloyd G. Humphreys, Lois Meek Stolz, and Edward Krug, now at the University of Wisconsin, helped me to clarify the relationship between various areas of specialized knowledge and teaching practices. The staff with whom I worked at San Francisco State College in 1949, LaVonne Hanna, Glenn Kendall, now President of

Chico State College, Arch Lang, and Fred Wilhelms will note inclusion of many of the problems of professional teaching which were raised in our discussions. My colleagues at Colorado State College of Education, particularly Howard Reid, Arno Luker, Earle U. Rugg, Sam Gates, and Jack Shaw discussed specific points with me related to their areas of specialty, while Elizabeth Carney, LeRoy Kerns, and Doris Steffy contributed to the descriptions of effective teaching as indicated in Chapters 8 and 9.

There was a group of doctoral candidates in teacher education at Stanford University, 1947-1949—Katherine Dresden and Donovan Swanson of Chico State College, Lovell Patmore of Central Washington State College, Walter Nagle of Long Beach State College, Thomas Livingston of Texas Technical College, and Arthur Hall of San Francisco State College—with whom I had the privilege of sharing in research activities and in discussion of problems of the profession. More than any other, these experiences served to clarify ideas concerning what good teaching and good schools can do for the youth of America.

The four individuals most responsible for bringing this book to you in its present form are John Guy Fowlkes, editor of the Harper Exploration Series, who gave clear, concise, and helpful editorial suggestions; George Willard Frasier, President Emeritus of Colorado State College of Education, who offered constructive criticism of the original section and chapter outline; Edward Krug of the University of Wisconsin, who read the manuscript and suggested improvements; and my wife, Iyla, who typed the manuscript.

HERBERT J. KLAUSMEIER

October, 1952

Madison, Wisconsin

**PRINCIPLES
AND PRACTICES OF
SECONDARY SCHOOL TEACHING**





INTRODUCTION

What can be provided today in high school instruction which will assist youth to develop the understandings, skills, and attitudes necessary to adjust well to their present life situations? What can we do today to help them build the understandings, skills, and attitudes whereby each individual finds a reasonable measure of success and achievement in line with his abilities and aspirations? What can we do today to help them prepare to take their positions in the adult world as efficient individual producers and as socially conscious members of democratic society? These are urgent problems confronting everyone concerned with secondary education, especially the classroom teacher.

The classroom teacher has face-to-face relationships with students. The classroom teacher is the key person in rendering educational services to youth and to society. The classroom teacher may influence the destiny of students and of our society each day that the students and the teacher meet in the classroom. When teachers have the instructional skills and the personal qualities which transform the school into a life workshop for maturing adolescents, teaching is professional; the service rendered to youth, to their parents, and to our whole society is of high value.

SIX CHALLENGES TO SECONDARY TEACHERS

Six distinct challenges, derived from examination of the cruciality of secondary education in modern life, need close examination by those who teach adolescent boys and girls:

1. How can teachers make the general goals of secondary education come to life in the classroom?
2. How can teachers provide for wholesome personality development of each boy and girl in the classroom?
3. How can teachers integrate established principles of learning in classroom practice?

4. How can teachers, through knowing the ideals of democratic living, assist youth to improve the quality of human associations?

5. How can teachers organize learning activities which are worth while for all youth?

6. How can teachers improve the status and prestige of the profession?

Understanding these challenges yields clarification of what is meant by professional teaching.

First, how can teachers make the general goals of secondary education come to life in the classroom? Secondary schools are supported by the people through taxation and have been organized to maintain and improve democratic living. Parents, living in local communities, have a share in deciding what the school shall provide in educational services. Large groups of adult citizens, living in the various states, share in deciding what the state shall do educationally. On the national level, an outstanding group of nationally prominent citizens is working to improve the quality of public education. Public school teachers, administrators, and college staffs, representing various localities and states, unite in national associations to examine the functions of secondary education and to formulate goals for secondary schools. In this way, some of the more important goals of secondary education are incorporated in each local school's formal statement of aims; and the best thinking of a great many individuals goes into the process.

Besides being a member of state and national associations which work on the general goals, every teacher has a share in deciding the purposes of instruction in a particular classroom. Every teacher has responsibility for helping students to understand why they take a course and how they may profit from so doing. Every teacher has definite responsibility to help students see the value of what they are doing. The general goals provide the guides for this phase of the teacher's work. It is imperative that teachers understand what the secondary schools throughout the nation are trying to do. Understanding these goals reveals the magnificent proportions of the service which is provided through education. Participating in setting the aims of the school, in outlining the specific purposes of a course, and in helping

students to find purpose and value in their classroom activities lends richness and vitality to the teacher's daily activities.

Consider two cases for a moment. One teacher of English, unfamiliar with the magnitude of the general goals of secondary education, goes to class each day and follows, page for page, the English grammar with no purpose other than covering a certain amount of exercise which someone else has organized. The students see little purpose in their activity. Another teacher greets young, maturing boys and girls each day. Together they decide how to carry out interesting activities to improve their oral and written expression. They refer to the text as they need guides for improvement and after the teacher, through skillful organizational procedures and use of materials, has helped them to build purpose in the study. The difference between the two is one mark of professionalism.

Second, how can teachers provide for wholesome personality development of each boy and girl in the classroom? Every classroom represents part of the life space in which maturing youth seek and find answers to the problems of growing up into adulthood. In the past two decades a vast body of information has accumulated concerning growth processes during the adolescent period. Many careful investigations point the way to more effective classroom practices which take into account adolescent growth and development. The laws governing rate, sequence, and direction of physical growth are gradually falling into a known pattern. The sequence of personality development as reflected in maturing patterns of emotional, social, and creative life is also becoming better understood. Each individual has unique growth characteristics and behavior patterns shaped by his heredity and the environment which he has already experienced. However, all youth, because they are of the human species and grow up in our social order, have some common characteristics. The professional teacher, by knowing the behavior patterns of individuals and groups of individuals, finds a balance between individual and group activities in the classroom.

Behavior of boys and girls is both understandable and modifiable. Within the limits set by heredity and situations already experienced,

the behavior of boys and girls can be guided into socially approved and individually satisfying patterns. Adolescents are adaptive and seek approval of their classmates and of adults. This characteristic of adolescents needs to be encouraged and utilized in the classroom rather than thwarted. Any teacher may encounter "discipline problems" in the classroom. The ineffective teacher is not concerned with the problems youth face because they are maturing and uses punishments to repress their need for approval from classmates. The better teacher capitalizes upon this need to build higher morale in the group, thereby preventing many problems from occurring. Also, the better teacher meets conduct problems as a challenge which merits his exercise of judgment. To provide situations in which youth mature wholesomely and to make the classroom atmosphere emotionally stable are exciting adventures in professional teaching.

Third, how can teachers integrate established principles of learning in classroom practice? Although the exact nature of neural processes operative in learning is not understood fully, great progress has been made in discovering how to organize and direct learning situations. Equally important, we are learning practical ways to evaluate various classroom methods so that ingenious teachers may find better methods of instruction through experimentation.

Of particular value to teachers are the advances which have been made in (1) defining and measuring different kinds of abilities which exist both within and among learners, (2) discovering and measuring different degrees of learning capacity, (3) determining how readiness affects performance in particular learning activities, (4) understanding the dynamics of motivation, (5) providing meaningfulness to learning, (6) determining the right kind and amount of practice, (7) selecting learning activities on the basis of transfer, (8) evaluating the products of learning, and (9) formulating a developmental sequence of teaching in harmony with the dynamics of learning.

On the basis of many investigations carried out in classrooms, experimental laboratories, and clinics, generalized principles have been established in each of the above areas. These generalized principles guide the teacher in organizing and directing learning activities. If all the answers were known and could be obtained through reading

a book, teaching would at the same time be made easier but infinitely less interesting. Because learning is an individual process and because individuals vary both in rate and capacity for different kinds of learning, each teacher must experiment with procedures which work best with the particular adolescents being taught. Therefore, understanding the established principles as guides to effective teaching and experimenting to discover better methods of presenting learning activities constitute a major challenge. There is a vast difference between perfunctory presentation of subject matter and organizing vital and worthwhile learning activities for youth. The difference spells professionalism in teaching.

Fourth, how can teachers, through knowing the ideals of democratic living, assist youth to improve the quality of human associations? People, associating together for the past centuries, have undergone many types of experiences and have learned the rules necessary to get along with each other. From their many experiences they have formulated ideals which are passed from one generation to the next. Experience has taught and is teaching that five ideals contribute to individual and group life: (1) Each person respects the unique personality of others; (2) each person coöperates with others for their mutual welfare; (3) each person uses intelligence rather than force in solution of problems; (4) each person accepts responsibility for his actions in a society of free men; and (5) each person accepts the premise that progress can be made. In social groups good will and harmony follow when these ideals are practiced. When they are discarded, strife and war result. Current local, national, and international affairs indicate the great need for living according to these ideals. Divorce rate and breakup of homes, poverty and economic misery, titanic struggles between labor and management groups, discrimination followed by riots between racial and nationality groups, and international wars point to the serious consequences of not teaching these ideals and living accordingly.

Boys and girls first learn to associate harmoniously in the home, the neighborhood, and the school; then in the broader state, national, and international community. National hatreds, class distinctions, and racial prejudice are learned first by children and youth in our homes, in our

communities, and in our schools. The examples set by adults largely determine the kind of conduct youth will practice. Departing from authoritarian methodology and instituting classroom methods in harmony with the ideals of democratic living is another mark of the professional teacher.

Fifth, how can teachers organize learning activities which are worth while for all youth? Significantly, the goals of secondary education state that all youth of school age should attend school and should profit from so doing. That is, a teacher must organize learning experiences which challenge the abilities and interests of all students who meet with him in a particular class or school activity. Making learning activities worth while for each student is not easy. It taxes the ability and resources of the best teacher.

Eight important skills other than those already mentioned provide a concise overview of what is needed to make learning activities worth while to students in the classroom:

1. Plan basic instructional procedures and use of instructional materials prior to actual teaching.
2. Create a favorable setting for the learning activity in which the emotional tone is pleasant, routine is managed efficiently, and the physical conditions are healthful and comfortable.
3. Use a variety of instructional procedures which lead to a balance between teacher- and student-initiated activities, between individual and group work, and between present interests and future needs of the students.
4. Make assignments skillfully, using methods appropriate to the activity and to the characteristics of the students so that learning proceeds smoothly and continuously.
5. Help students develop efficient study and work methods.
6. Develop students' creative and expressive abilities in harmony with their aptitudes and interests.
7. Use community resources to help students understand the needs, problems, and way of life of the community.
8. Develop effective evaluation procedures whereby students with teacher help learn to evaluate their weaknesses and strengths related to achievement, work-study methods, and conduct.

These are important skills closely related to immediate teaching-learning situations. Others not so closely connected with the teaching-learning situation include defining the aims of the school, defining policies of the school, constructing a course of study, building a resource unit, selecting textbooks and other teaching aids, making the schedule of classes, outlining the requirements for graduation from the school, and setting up the program of school activities. All of these are important areas in building the curriculum of the school and contribute significantly toward making learning activities meaningful for students. The beginning teacher should probably first concentrate on making his classes and those school activities which he directs most worth while to the students and then, as part of his continuing professional responsibility, actively participate with other school people in formulating the broader aims and policies of the school and the content and sequence of activities in the whole school program.

Sixth, how can teachers improve the status and prestige of the profession? This challenge has three facets: first, assuming responsibility for personal improvement; second, contributing to upgrading the whole profession; and third, carrying out duties and responsibilities of citizenship.

Teaching, like other professions, has a scientific basis, a history, a code of ethics, and social aims. It draws its basic principles and procedures from five major sources—psychology, sociology, philosophy, aesthetics, and history. Psychology and the biological sciences have contributed foundational information concerning the individual—how he grows and matures, how he learns, the nature of individual differences, mental health, personality development, and evaluation. Educational psychology has also contributed basic experimental data and methodology concerning placement and method of presenting curricular experiences for particular learners. The science of sociology has contributed extremely useful data regarding the nature of society and its problems and has outlined techniques for gathering and analyzing such data. Educational philosophy has provided a partial answer to the question of personal and group values to be sought through education. Aesthetics has contributed new insight into utilizing the creative potential of American youth to produce a design of life based on American

values. Educational history supplies perspective whereby the teacher understands the past so that the present may be analyzed more accurately and the future controlled more perfectly. From an integration of all of these the social aims of the profession and a code of ethics in harmony with American life have emerged. The translation of what is now known into a unified personal and professional way of life is a major challenge for each teacher.

As members of a profession, teachers maintain good relationships with students, parents, other teachers, and administrators. They organize in local, state, national, and international groups to raise the status and prestige of the teaching profession and at all times give evidence of the importance of teaching to the general public. In modern life, professional organizations are necessary to gain access to the means of communication—radio, newspapers, and periodicals—and to influence legislation. Unity means strength. The morale of the school and the financial support from local, state, and national sources are no greater than the strength of organized teacher groups.

Undoubtedly, the weakest link in the teaching profession is made up of the chance manner in which youth are drawn into teacher education and the lackadaisical procedures followed in starting classroom teaching. Internship, similar to that practiced in the medical profession, is a "must." The one-hour student teaching assignment for one or two semesters is completely inadequate for building a profession. Wherever this antiquated and outmoded procedure has given way to internship, teachers in service have given generously of their time to help beginning teachers make a good start. Professional teachers accept their share of responsibility for getting the best youth to take up teaching as a career and give of their time and experience to provide decent standards and situations in which the beginner gets a good start. Accepting these responsibilities will upgrade the whole profession.

Besides meeting responsibilities pertaining directly to professional matters, teachers may do much to improve the prestige of teaching through carrying out their duties and responsibilities as citizens efficiently. The teacher does not forfeit citizenship upon entering the classroom, nor does responsibility as a citizen cease. To be interested in the affairs of the community, to vote for officials and representatives,

to participate in community activities, and to maintain good relations with organizations concerned with the welfare of youth are activities which indicate worthy citizenship. Also, because teachers have four or more years of college education, they must accept added responsibility for assuming leadership in the community.

Along with responsibilities teachers have rights, as do other professional groups. In matters pertaining to personal affairs such as voting, attending church, managing finances, and engaging in recreation, teachers are free to live within limits set by the democratic community of which they are participating members. Professional groups work out their standards of behavior. The criterion for behavior is that each teacher is an emotionally mature and stable individual, respected by self and others, who participates in building the life of the local, national, and world community.

These are challenges to professionally minded teachers. Initiative and resourcefulness are necessary to vitalize classroom instruction. Secondary education is to help all youth. Teachers are the first line of offense for upgrading the whole structure of democratic living.

PLAN OF THE BOOK

The challenges just discussed provide an overview for the organization of this book. In the next five chapters we shall investigate, first, the objectives of secondary education; second, the nature of adolescents and methods for studying particular adolescents; third, the learning process and how to experiment with teaching methods; fourth, democratic living and how to study community life; and fifth, curriculum and how to analyze curricular organization. These chapters will provide basic understandings and methods for answering five questions which every teacher faces in meeting a group of students: (1) Why are the students and I here and what are their and my purposes? (2) What are the characteristics of these youth, individually and as a classroom group? (3) How can I best help them learn? (4) What is the nature of the community in which these youth live and in which I teach? (5) What are the most worth-while learning activities which may be organized for these students? These understandings and skills

are foundations for preplanning and for organizing and directing learning activities in all secondary classrooms.

The second section presents a developmental sequence for planning and teaching based upon sound psychological principles of learning and upon democratic management of human relations in the classroom. In Chapter 6, planning on a yearly, unit, and daily basis is examined along with the relationship between teacher preplanning and coöperative teacher-student planning. Getting off to a good start through skillful organization and direction of initiatory activities is the message of Chapter 7. Procedures in developing major school learnings and carrying them to successful completion are surveyed as developmental and culminating activities in Chapter 8.

Chapters 9, 10, 11, and 12 build upon principles and organizational procedures outlined above and present more specific methods for vitalizing classroom instruction. Methods for conducting individual work and group activities, for using instructional materials to insure concreteness and meaningfulness in learning, for building effective study habits and work procedures, and for developing appreciation and creativity are outlined in these four chapters.

Problems related to building high classroom morale, maintaining discipline, and developing an effective work situation are investigated in Chapter 13. A modern program of guidance services is surveyed in Chapter 14. Evaluation procedures are treated in Chapter 15. In Chapter 16 some of the more important problems which cut across chapters and section organization are summarized.

CHAPTER 1

The Goals of Secondary Education

Understanding the general goals to be achieved in the secondary schools of the nation helps us to grasp the magnificent possibilities for service to youth, to their parents, and to society. Understanding the goals serves to guide our efforts in formulating specific objectives to be achieved in our classrooms. Understanding the goals helps us to comprehend the kind of teaching skills and personal qualities needed to achieve them. Understanding the goals helps us perceive how teaching youth may bring to us a high measure of personal satisfaction and happiness in our quest for self-realization.

The general goals of secondary education are formulated in relation to societal needs and attempt to incorporate the will of the people at the present time and also their expectancies for the future. We can understand the present and make estimates concerning the future only in relation to the more immediate past. Therefore, in brief verbal snapshots of the American scene since 1890, we examine significant changes which have occurred in three major aspects of our life: the urbanization of society, family living, and the secondary school itself. Then some of the more important statements of goals are analyzed. Finally the more important teaching skills needed to achieve the goals through classroom instruction are discussed.

SOCIAL CHANGE AND THE GOALS OF SECONDARY EDUCATION

The past half-century yields a fascinating story of human progress and presents many vivid pictures of changing patterns of group living.

It also yields a multitude of unsolved problems in the area of human interaction, especially related to the direction in which social institutions, including the family and the secondary schools, are headed. Familiarity with these changes and problems provides some basis for interpreting the goals of secondary education.

URBANIZATION OF SOCIETY

In 1890 we were well on the way to becoming an urban society, having followed the course set by the great advances in technology preceding and immediately following the Civil War. The last free public lands were occupied in 1890. Unmistakable trends which were apparent in the lives of a minority of the population prior to 1890 have now progressed so that they permeate the life of everyone today. Three of these need your attention.

First, assembly-line production of goods and nation-wide and world-wide distribution of goods have resulted in less control of the means for securing a livelihood by individuals and families. As production moved from the home and small shop to the giant factory, unorganized groups of individuals lost control over production. As distribution moved to national and international areas, unorganized groups of individuals lost control over distribution. Wage earners and salaried persons have become more dependent upon the large corporations for their livelihood. The growth of labor unions, of farmer unions, and of professional organizations (nearly a million educators are members of the NEA in 1952) indicates how individuals have attempted to secure greater control over their economic destiny.

Second, specialization for particular kinds of jobs to be performed and the greatly increased number of different jobs has led from long apprenticeship in skilled crafts to short job-training periods for factory jobs. Since the jobs to be performed are usually outside the family orbit, mainly in factories, offices, and transportation, fathers are unable to teach their sons the job skills needed to secure a living. Labor unions, to protect seniority rights and to control number of competitors for jobs, wield considerable power over apprenticeship training. Labor and industry share in working out on-the-job training programs at the present time. Professional organizations control their membership.

The labor, farm, industrial, and professional organizations are responsible for passing state and national laws affecting child labor, job training or apprenticeship, and certification standards for the professions. These procedures result in less control by the family and the individual over preparation for making a livelihood.

Third, the growth of big cities, along with inventions in communication, transportation, and sources of energy, has brought new and yet unsolved problems of group living. The way of life in the large city has extended throughout the suburbs into many areas of rural life. Problems of housing, democratic control of government, education, crime, minority groups, and delinquency in the larger cities are reflected in the suburbs and rural areas. These same types of problems, which indicate lack of unity and common purpose in city living, extend into regional strife among states and into world strife among nations.

As a result of changing from a rural to an urban way of life, group relationships have shifted from the warm, friendly, and close feelings involved among a few close neighbors and relatives to impersonal acquaintanceships with many individuals among whom are the family next door and one's own family. It is easy, by using cars, airplanes, and trains, to get away from the family and neighborhood. Work often requires this self-removal. Working away from the home brings many new acquaintances not closely related to one's own mores, customs, and standards. There are few close ties with these acquaintances. Relationships in work, in recreation, and in the church are often impersonal. The impersonal feeling which accompanies knowing the atom bomb has been released on cities, cutting away from one's church, ignoring the distress of one's neighbors, forgetting to send birthday greetings to one's relatives, being unconcerned about the student who quits school or fails—all of these to some extent mirror a reflection of the urbanized American.

In what social institutions have these changes had most impact? The answer is not known completely; but it is apparent, as we shall see now, that the family and the secondary school in the period 1890–1950 have changed markedly. Through noting how significantly these basic institutions have changed, we are able to gain better perspective of the goals to be sought in the secondary school.

CHANGING PATTERNS OF FAMILY LIFE

The family still remains the basic social unit for reproduction of the human race, for satisfying the biological needs of children, for bringing up children in the family traditions and patterns of behavior, for providing security and affection for all members of the family, and for developing and maintaining coöperative working relationships among the members. The degree to which the family has changed in performing these functions is indicated by size of family, divorce rate, and amount of time spent in the home by family members.

In 1790 the average number of children per family was 3.7; by 1890 this had decreased to 2.9 and in 1940 was 1.8. During World War II and the subsequent years the average was approaching 2.0 children per family. Some other patterns relative to the reproductive function were established in the period 1890 to the present which are highly significant for the teaching profession. First, in the higher socioeconomic groups, parents have fewer children; the persons engaged in the professions do not produce sufficient children to maintain their numbers. Second, birth rate has fallen off sharply in metropolitan areas as less space is available for raising children and as the cost of raising them has increased. Third, rural families continue producing more children than can be employed profitably in rural areas. Fourth, families in the poorest states and communities, economically, have the largest number of children. Fifth, the practice of controlling family size has become widespread in American families; nationally, birth rate decelerates in time of depression and accelerates during prosperity. Sixth, a new attitude toward sex in marriage has materialized. Married couples commonly consider the mental hygiene aspects of marriage as well as the reproductive and economic. Seventh, the marriage ceremony itself is governed less by the mores and traditions of the particular families involved, more by impersonalized local and state regulations, which include such requirements as licenses, blood tests, and waiting periods. These are established trends; whether they are good or bad is not discussed. The important consideration for teachers is that differences exist in the extent to which parents desire a good education for their children; in the ability of parents, communities, and

states to support a good program of education; and in the kind of attitudes and values taught to children in the home.

The ratio of marriages to divorces has established a pattern. In 1890 there were sixteen marriages to one divorce; by 1910, eleven to one; in 1920, eight to one; in 1940, six to one; and in 1950, four to one. It is possible that this trend may continue as wives become less and less dependent upon husbands for support of themselves and their children. The divorce rate provides indirect evidence that some American families are not providing security and affection to all members of the family nor maintaining coöperative working relationships among all members of the family. Every teacher and every school must recognize that, because of the breakup of family life, boys and girls come to school with greater dependence upon it for assisting them to develop attitudes and behavioral patterns which may enable them to get along well in school and to make more effective parents eventually. Many of them have not learned to give and to receive affection or to work out problems of daily living on a coöperative, friendly basis. These two learnings are basic for good adjustment in school and for happy family living.

Family members spend less and less time together in the home and in recreation outside the home. Four major factors have contributed to this tendency. First, automobiles are used widely to take members away from the home to their jobs and elsewhere. Second, commercialized recreation, particularly athletic events and movies, compete with home recreational activities which involve the whole family. Third, mothers spend larger portions of their time in working outside the home and in social activities. Fourth, private, semipublic, and public agencies are assuming more responsibility in providing recreational, vocational, and avocational opportunities for children outside the home.

We recognize that the high school teacher cannot be a parent and provide security and affection for the socially maladjusted youth. The secondary teacher cannot feed, clothe, and supply medical attention in all cases where it is needed. The secondary teacher cannot take responsibility for getting all youth prepared for a job. We prefer that the home assume its due share of responsibility for performing these

functions. We do not wish to take the privilege of doing so from parents. We must recognize, however, that what the child learns or does not learn in his home vitally affects his conduct and adjustment in school. The school must render some services to youth today which a few decades ago were left to the home.

CHANGING PATTERNS IN SECONDARY EDUCATION

Currently, professional instruction is the greatest service provided to American youth through organized government. When we look at the high school of 1900 and compare its enrollment, instructional methods, and organization with those of the present, we discover that the progress achieved in the past half-century represents an outstanding contribution of education toward democratic life in America. Growth in amount and quality of secondary education is one of the fascinating stories in our history and in the history of mankind.

Changing Enrollment in Secondary Schools. In 1900, most high school students enrolled in a college preparatory course to acquire knowledge and skills necessary to get into colleges and universities. About 10 percent of school-age youth attended high school. About 75 percent of those who were graduated from high school went to college.

Enrollment, fortunately, did not remain static. During each decade since 1900 high school enrollment doubled, starting at about 500,000 in 1900 and reaching 4,000,000 in 1930. Over 7,000,000 students were in attendance during 1940; of those who were graduated from high school in 1940 less than one-fourth went to college. During the war years enrollment decreased. Part of this decrease resulted from the necessity for youth to engage in military and allied services during the war; part from the lower birth rate during the 1930's; and part from youth's finding life outside the school more attractive than remaining in school to become "educated."

According to the Research Division of the National Education Association, public secondary enrollment dropped about 1,000,000 during the war years. During the school years 1946-47, 1947-48, 1948-49, and 1949-50, public secondary school enrollment was estimated

at 6,460,306, 6,501,300, 6,804,470, and 6,464,584, respectively.¹ This very slow gain in secondary enrollment in the years after 1945 and the estimated drop in 1949–50 indicate that in the decade 1940–49 the public secondary schools did not continue to attract and to hold a higher portion of school-age youth as they did in every decade prior to 1940. Apparently, in times of prosperity the secondary school loses some ground.

Two significant conclusions may be drawn from the study of these enrollment figures. In 1900 the more academically inclined and verbally gifted students attended high school, and most of them went to college after graduation. At the present time, students representing the whole range of abilities are attending high school. Most of them do not go to college. The curriculum offerings and teaching methods must have changed markedly or the school would not retain such large numbers. If we are losing ground since World War II, perhaps further improvement in curriculum offerings and teaching methods is required.

Changing Patterns of Instructional Methods. In the latter part of the nineteenth century instructional method was directed toward imparting knowledge. At that time the mental-faculty or formal-discipline theory of learning was in vogue. It was generally thought that through tough "mental" exercises the faculties of the mind would so develop that boys and girls would be able to meet any of life's problems successfully. High school teachers, most of them educated in liberal arts colleges or universities, came to the high schools filled with many subject skills but little understanding of adolescents and of the learning process. It is understandable that they followed the practices of the university professors in their teaching methods. Lectures, reading and reciting lessons, and long assignments to be completed outside class were widely used instructional procedures. Mathematics and grammar were emphasized to develop reasoning ability. Long and hard assignments were given to "toughen" the fabric of youth's mental faculties. Drill and memorization of facts were considered of high value in devel-

¹ "Advance Estimates of Public Elementary and Secondary Schools for the School Year, 1949–50," Research Division of the National Education Association, Washington, National Education Association, p. 5.

oping memory ability. Discipline was often harsh and severe. Heavy reliance was placed on textbook materials; little attention was paid to using community resources.

In the 1890's John Dewey's writings started to appear. Early in the 1900's G. Stanley Hall's writings emphasized the nature of the learner. Both of these men stressed understanding of the learner as paramount in teaching method. Dewey insisted that learning is an active, not a passive, process; that the learner must be actively engaged in learning; and that human beings are constitutionally active and want to participate in problem solving. Further, Dewey believed that public school education should be a fundamental method of social progress and reform; therefore, instructional procedures in the classroom should be focused on helping the learner develop so that his expressive and creative abilities are directed toward socially significant ends.

Thorndike, James, and Judd, three great psychologists of the early part of the century, completely disproved the theory of formal discipline. Memorization of difficult and poorly understood materials does not help the learner solve life's problems. No one subject has any more inherent value than any other in developing reasoning power. Whether anything learned in the classroom helps the child solve problems outside the classroom or helps him develop into a more effective adult depends not only on what is taught but also on how it is taught. So, in the 1920's instructional procedures began to be set up designed to take into account the child's interests; the child-centered school came into being.

Many experimental instructional programs, based on expressed student interest, were not sufficiently successful to continue for a sustained period of time. Some were ineffective because of teacher inability to handle the techniques for such instruction; others because the colleges and universities continued to require for admission a definite pattern of subjects and subject achievement. Also, we came to recognize that instructional method which utilizes expressed interest of children and youth may not take into proper account their future needs or their responsibilities to society.

The First World War and the depression of 1929 and the early thirties injected a new note in the educational world. We became more

concerned with the importance of social goals to be achieved through high school education and with the needs of all the people to build a unified democratic society. The question of how much instructional procedures should be directed toward individual development as compared to development of the individual for more effective participation in group life became a central issue and remains so. Group projects involving coöperative effort, group discussion centering on solution of social problems, student government, field trips, and community surveys indicate the socializing emphasis in instructional method. Techniques to develop better understanding of group living and to build social interaction skills have become incorporated in the secondary teacher's instructional method.

Along with a changing emphasis in education, technological advances in the production and widespread distribution of audio-visual aids to instruction and printed materials have made it possible to improve classroom instruction. Skill in efficient use of these materials is now considered an important area in the professional education of teachers.

Changing Patterns in Secondary School Organization. During the first half of this century the organization of secondary schools has undergone many modifications. In 1900 the typical pattern of organization was an eight-year elementary school and a four-year high school. Numerous objections were voiced against the long period of elementary school. Particularly, the elementary curriculum and teaching methods were not appropriate for young adolescents in grades seven and eight. The junior high school originated in the early 1900's, and during the period 1910 to 1930 many junior high schools were organized to include grades seven, eight, and nine. Thus the 6-3-3 vertical organization came into being, primarily to improve instructional services for the thirteen-, fourteen-, and fifteen-year-old children. This pattern of the six-year elementary school and the three-year junior high school is widespread in cities. Rural communities with small populations find it impractical to build a separate junior high school. Many cities where the 8-4 plan was firmly entrenched prior to 1920 continue in that pattern. The junior high school, where it exists, is classified as a secondary school.

Shortly after the turn of the century another new institution, the junior college, was organized. The junior college grew rapidly after 1920, particularly in the West. In 1917, some 4500 students were enrolled in junior colleges; by 1945 over 250,000 students were enrolled, and nineteen states had ten or more junior colleges. In some communities the junior college developed simultaneously with the junior high school. In those communities, a 6-3-3-2 or a 6-4-4 plan of vertical organization emerged. The vertical organization appears to be generally fixed in a 6-3-3-2 plan, but it is still undergoing modification as the junior college becomes more definitely free public education.

Horizontal organization, or arrangement of curriculum and instruction within the junior and senior high school, is in a state of fluidity. The neat and precise listings of subjects in instructional periods of equal length for the high schools of 1890 are now massive statements of various courses which may be pursued and include instructional periods of varying lengths. Major attention is given to this problem in Chapter 5, "The Nature of Secondary Curriculum."

In summary, social change as reflected in the urbanization of society and in changing patterns of family life and secondary education has greatly influenced the goals to be achieved in our secondary schools. The effects of this change are apparent in statements of goals, 1890 to the present.

STATEMENTS OF GOALS

Formulating the general goals of secondary education has been the problem of a number of individuals and groups. Many different statements of goals have been formulated during the past half-century, particularly since 1935. Only a few may be discussed here. Since the National Education Association is the professional organization for teachers, selected statements of organized groups affiliated with the NEA or other large educational bodies are presented, and in this chronological order:

1. The Committee of Ten, 1894.
2. The Commission on the Reorganization of Secondary Education, 1918.
3. The American Youth Commission, 1935.

4. The Commission on Secondary School Curriculum, 1942.
5. The Educational Policies Commission, 1944, 1946.
6. The National Association of Secondary School Principals, 1947.
7. The Commission on Life Adjustment Education for Youth, 1945——.

THE COMMITTEE OF TEN, 1894

In 1892 the National Education Association appointed a Committee of Ten on Secondary Studies. This committee appointed nine subcommittees and, after two years of study, submitted a report on secondary education.² The committee stated that the main purpose of secondary schools is to prepare for the duties of life that small proportion of all the children of the country who are able to profit from education to the eighteenth year and whose parents are able to support them in school. The committee proposed also that college admission requirements be the same as the requirements for high school graduation and that the secondary schools do not exist to prepare boys and girls for college. Apparently it was the intent of the committee that the high school should set its requirements for graduation and that the colleges should accept the high school graduate.

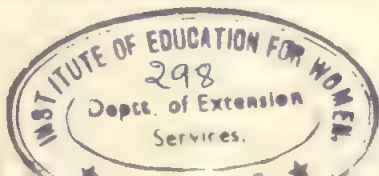
Somehow, this statement of purpose was interpreted to mean that those youth who could profit from attending high school were also the mentally able and academically gifted who would go to college; therefore the high school should prepare them to meet already established college entrance requirements. The kind of life which the students were to be prepared for in the secondary schools was mainly that of the college and university.

You recall from the previous discussion that in 1890 the mental-faculty concept of learning was widely accepted and that only a small portion of school-age youth attended the secondary schools. In 1894 the proposal that secondary education was to prepare the students to meet the duties of life was a very forward-looking statement. Unfortunately, it was not widely accepted at that time.

² *Report of the Committee of Ten*, New York, American Book Company, 1894.

370.73

Klaus



THE COMMISSION ON THE REORGANIZATION OF SECONDARY EDUCATION, 1918

The Commission on the Reorganization of Secondary Education, which was formed in 1913, issued a statement of goals in 1918.³ You recall that high school enrollment doubled during each decade, 1890-1920, that we underwent a rapid shift toward greater centralization of wealth after 1890, that hours of work per week in factories were generally decreased, that labor organizations became stronger, and that we became engaged in World War I to save the world for democracy. The need for more secondary schools to accommodate more youth and the need for improving secondary education to make it of more worth for students who did not intend to go to college was becoming apparent.

Recognizing these and many other factors which were operating in American life, and with breadth of vision concerning the role of free public secondary schools in democratic life in the future, the commission proposed that every normal boy and girl should be encouraged to stay in school till age eighteen, that the second six years of school should be specifically designed to meet the needs of pupils in the age group twelve to eighteen, that extending free school into the junior college level was desirable, and that education in a democracy should develop in each individual the knowledges, interests, ideals, habits, and powers to find his place in society and to shape both himself and society toward nobler ends. The seven objectives of secondary education proposed were as follows: health, command of the fundamental processes, worthy home membership, vocation, citizenship, worthy use of leisure, and ethical character.

Worthy home membership, citizenship, worthy use of leisure, and ethical character, in particular, are types of learning outcomes which are peculiarly related to the role of education in an urbanized society in that in rural society the family assumed major responsibility for these learnings. The statement of 1918 is thus a frank recognition that many of these functions previously performed by the home and to some extent the elementary school were now goals to be achieved in the secondary school. Also, vocation in this statement subsumed that the pro-

³ *Cardinal Principles of Secondary Education*, Bulletin No. 35, Washington, U.S. Government Printing Office, 1918.

fessional career, entered via college and university education, was simply one of many useful vocations. The Smith-Hughes Act, which made special provisions for education in home economics and agriculture and which paved the way for bringing trades and distributive education into the curriculum, was enacted into federal law in 1917.

The Cardinal Principles received much attention from educators, and many secondary schools extended their curricular offerings, mainly by adding elective courses and by setting up commercial, home economics, agriculture, and shop courses which students might pursue as major areas of study or as electives. In the larger schools, particularly, the college preparatory course declined in numbers of students pursuing it but apparently did not and has not yet lost its prestige as the most desirable course to pursue.

The depression, beginning in 1929 and extending into the 1930's, brought increasing attention to the crucial role of secondary education in the life of youth. More parents and other persons became concerned about what could be done for unemployed youth not in school and what could be done for youth in school to prepare them more efficiently to meet the problem of making a decent living for themselves in times of national economic distress.

THE AMERICAN YOUTH COMMISSION, 1935

In 1935 the American Council on Education organized the American Youth Commission, which operated until World War II. This commission devoted its attention to studying the problems of youth in modern society and brought together information which clearly demonstrated the need for extending opportunity for more youth to attend school and also for making secondary education fit the needs of more youth in school. After examining the needs of representative groups of youth of school age, identifying the facilities which were available to youth in their communities, and helping some communities to experiment with improving their services, the commission published its most important finding in books—*How Fare American Youth?* *Youth Tell Their Story*, *Matching Youth and Jobs*, and *Equal Educational Opportunity for All Youth*. These publications, perhaps as much as any group during that period, acquainted teachers with the undesirable effects

which quitting school prior to graduation had on youth. To some extent, the commission made many Americans conscious of what good secondary schools might do for youth and of the serious consequences of allowing young adolescents to quit school and be drawn into a life of wastefulness and unhappiness through squandering their time and talents in unproductive activities outside the school.

In 1939 the European war broke out; in 1941 the Japanese attacked Pearl Harbor. The need for youth in military and allied services turned attention from the demoralizing effect of the depression on youth to getting them prepared quickly to do the work of men at war.

THE COMMISSION ON SECONDARY SCHOOL CURRICULUM, 1942

A committee of fourteen educators from the North Central Association's Commission on Secondary School Curriculum studied problems of secondary education for a three-year period and published its findings in 1942.⁴ Considerable attention was given to the problem of organizing educative experiences in high school designed to meet the needs of all school-age youth residing in the community. The term "general education" was used to describe this kind of education. Three main features of general education in the secondary school may be summarized:

First, all youth in the community should attend secondary school. The curriculum, teaching methods, instructional materials, and evaluation procedures should be organized so that each child profits from engaging in that part of the high school program of instruction which is intended for all or which is general for all. Thus, the core of educative experiences which constitutes the requirements of all students for graduation should be organized to meet the needs of all youth in the community.

Second, the whole personality of the student is the concern of general education. That is, not only intellectual but also social, emotional, and physical growth, along with attitudes and values, is to be considered. Emphasis in courses in the general education program and in the whole school program is laid upon unified experiences of the learner rather than upon mastery of a single subject area.

Third, general education builds learnings which are nonspecialized

⁴North Central Association of Colleges and Secondary Schools, *General Education in the American High School*, Chicago, Scott, Foresman and Company, 1942.

in so far as vocations are concerned. Its purpose is not to prepare for specific careers such as the professions, the trades, or distributive occupations. Rather, general education is to build those understandings, skills, and attitudes which are closely related to becoming successful in different vocations. Through educative experiences in the general education program each student is to learn many understandings and skills which he uses in daily life activities regardless of which career he may choose.

You recall that approximately seven million youth were enrolled in secondary schools in 1940. The American Youth Commission had found that as many youth had not profited from secondary schooling as might have been anticipated. Throughout the 1930's, the responsibilities of each citizen to his government and the responsibilities of organized government to citizens were widely discussed, especially during political campaigns. During the same period, marked by rapid changes in international affairs with fascism and communism becoming stronger, many educators and lay persons became concerned with the responsibilities of secondary education in preparing youth for democratic citizenship. These and other significant events apparently led to the formulation of the three major emphases in general education: education for more effective citizenship, education for personal adjustment, and education to provide general vocational knowledge rather than training for a specific career or job.

It is interesting to note that, with the all-out war effort after Pearl Harbor, secondary schools went ahead more rapidly than during any previous period with programs to help adults and youth prepare for specific types of wartime employment. In statements of goals which follow, we shall see that, while the three emphases in general education are present, much attention has been directed to training for jobs those youth who need employment immediately upon high school graduation.

THE EDUCATIONAL POLICIES COMMISSION, 1944, 1946

The Educational Policies Commission of the NEA issued its now famous book and slogan—*Education for All American Youth*—in 1944.⁵ Seven basic purposes of the school were outlined:

⁵ Educational Policies Commission, *Education for All American Youth*, Washington, National Education Association and American Association of School Administrators, 1944, pp. 16-17.

All American youth are citizens now; all (or nearly all) will be qualified voters in the future; all require education for civic responsibility and competence.

All American youth (or nearly all) are members of family groups now and will become members of other family groups in the future; all require an understanding of family relationships.

All American youth are now living in the American culture and all (or nearly all) will continue to do so in the future; all require understanding of the main elements of that culture.

All American youth need to maintain their mental and physical health now and in the future; all require instruction to develop habits of healthful living, understanding of conditions which foster health, and knowledge of ways of preventing disease, avoiding injuries, and using medical services.

All American youth will be expected to engage in useful work and will need to sustain themselves and others; all therefore require occupational guidance and training, and orientation to current economic conditions.

All American youth have the capacity to think rationally; all need to develop this capacity, and with it, an appreciation of the significance of truth as arrived at by the rational process.

All American youth must make decisions and take actions which involve choices of values; all therefore need insight into ethical values. Particularly do they need to grow in understanding the basic tenet of democracy—that the individual human being is of surpassing worth.

The Educational Policies Commission also outlined Ten Imperative Educational Needs of Youth, which are given in some detail at a later point in this chapter. Also, frequent references to them are made throughout this book as the major goals of secondary education.

In 1946 the Educational Policies Commission published *Policies for Education in American Democracy*, in which the goals of secondary education were grouped under four major objectives: the objectives of self-realization, the objectives of human relationship, the objectives of economic efficiency, and the objectives of civic responsibility. The first of the four is included to illustrate the breadth and detail of this statement:

The Objectives of Self-Realization

The Inquiring Mind. The educated person has an appetite for learning.
Speech. The educated person can speak the mother tongue clearly.

- Reading. The educated person reads the mother tongue efficiently.
- Writing. The educated person writes the mother tongue efficiently.
- Number. The educated person solves his problems of counting and calculating.
- Sight and Hearing. The educated person is skilled in listening and observing.
- Health Knowledge. The educated person understands the basic facts concerning health and disease.
- Health Habits. The educated person protects his own health and that of his dependents.
- Public Health. The educated person works to improve the health of the community.
- Recreation. The educated person is participant and spectator in many sports and other pastimes.
- Intellectual Interests. The educated person has mental resources for the use of leisure.
- Esthetic Interests. The educated person appreciates beauty.
- Character. The educated person gives responsible direction to his own life.⁶

Note that the statement of the commission in 1944 emphasized the needs of "all" American youth which should be met in secondary schools. This statement, as you may see from reviewing the statements previously discussed, reflects the work of all the groups after 1918. The statement of 1946 defines the characteristics of youth whose educational needs are met. It is a description of individual young men and women who were needed in such large numbers during World War II and thereafter. In the military and allied services many man-hours and ultimately lives were lost because persons were inefficient as individuals, had not learned to work together in large groups, had not learned how to use time and property efficiently, or did not understand the value of subjugating personal wishes and desires in order to contribute to winning the war and the peace. Many rejections and failures in military and industry resulting from physical defects, mental inefficiency, personality disorders, and antisocial motives might have been prevented through a more comprehensive and adequate program of education throughout the nation.

⁶ Educational Policies Commission, *Policies for Education in American Democracy*, Washington, National Education Association, 1946. The four groups of objectives are found on pp. 192, 212, 226, and 240.

More responsibility and perhaps greater faith in the secondary schools resulted from the war and the ensuing period of instability. Both of the statements of the Educational Policies Commission are attempts to incorporate in concise form the role of the secondary school in meeting the needs of youth in a society characterized by rapid changes in all areas of life and by many new problems in conducting human relationships.

THE NATIONAL ASSOCIATION OF SECONDARY SCHOOL PRINCIPALS, 1947

In 1947 the National Association of Secondary School Principals, which had been working on problems in secondary education since 1932, brought new life into the imperative educational needs of youth previously formulated by the Educational Policies Commission. A series of ten articles illustrating what high schools were doing to fulfill these needs was printed in 1947.⁷ These descriptive articles, one for each of the ten needs, attempted to show what might be done to improve education. The study was a very comprehensive one involving coöperation of many individuals; the information was gathered from over two hundred different schools.

The materials thus gathered were synthesized into a statement of goals and related practices by which a school could decide whether or not a goal was being achieved and the extent to which it was. The most important items relative to each need were organized into twenty evaluative criteria of practice, to be rated on a five-point scale. This was done, on an experimental basis, so that particular schools and individual teachers might determine how they were doing, what remained to be done, and how it could be accomplished. The ten goals of secondary education which follow include eight of the two hundred evaluative criteria to indicate how meaningful the criteria are for classroom teachers:

1. All youth need to develop salable skills and those understandings and attitudes that make the worker an intelligent and productive partici-

⁷ "The Imperative Needs of Youth of Secondary School Age," *Bulletin of the National Association of Secondary School Principals*, Washington, National Education Association, March, 1947.

pant in economic life. To this end, most youth need supervised work experience as well as education in the skills and knowledge of their occupations.

- a. The school gives continual emphasis to the skills, attitudes, and work habits essential for success in any work situation.
- b. Everyone is encouraged to make suggestions for, and to have a part in, maintaining the school property in good condition for use by the whole group.
- c. The school provides opportunity within its own environs for practical experience in living and working with adults in their work situations.
- d. The school gives the same status to work experiences that it gives to experiences and activities offered as class work.

2. All youth need to develop and maintain good health and physical fitness.

- a. Health records of individuals are complete and up-to-date, and pertinent facts are put in the hands of those responsible for any pupil's guidance.
- b. The lunch period is conceived as a social hour for unhurried eating, friendly visiting, and pleasant relaxation.
- c. Clubs of a nonphysical recreation type are recognized as having mental and health value if they answer social and emotional needs of members.
- d. The school encourages student participation in planning, conducting, and evaluating the school's and the community's programs for maintaining and developing good health and physical fitness.

3. All youth need to understand the rights and duties of a citizen of a democratic society, and to be diligent and competent in the performance of their obligations as members of the community and citizens of the state and nation, and of the world.

4. All youth need to understand the significance of the family for the individual and society and the conditions conducive to successful family life.

5. All youth need to know how to purchase and use goods and services intelligently, understanding both the values received by the consumer and the economic consequences of their acts.

6. All youth need to understand the methods of science, the influence of science on human life, and the main scientific facts concerning the nature of the world and of man.

7. All youth need opportunities to develop their capacities to appreciate beauty in literature, art, music, and nature.

8. All youth need to be able to use their leisure time well and to budget it wisely, balancing activities that yield satisfaction to the individual with those that are socially useful.

9. All youth need to develop respect for other persons, to grow in their insight into ethical values and principles, and to be able to live and work co-operatively with others.

10. All youth need to grow in their ability to think rationally, to express their thoughts clearly, and to read and listen with understanding.⁸

These goals were originally formulated by the Educational Policies Commission, which group should be more able than any other to conceive the functions of secondary education throughout the United States. Definitely, these goals are not college preparatory in nature; they imply that the secondary schools are for all the youth in all communities. We may infer that the teacher who tries to achieve part or all of them needs a broad education rather than specialized study in one subject, such as history, or even in one broad field, such as the social studies.

Again, note the source of the evaluative criteria. They were gathered and officially stated by the National Association of Secondary School Principals. Teachers frequently say that they cannot follow sound educational practices in their classrooms because the administration wants only two things: silence in the classroom and high subject mastery by those students who go on to the state university. Some principals may still operate by these two guides. However, unless oral or written administrative statements indicate otherwise, the teacher rightfully assumes that achieving the ten imperative educational needs of youth by appropriate methods meets the approval of the administration.

Education for Life Adjustment, 1945——. The United States Office of Education, through its division of vocational education, has been active in post-World War II years. At a national conference of vocational educators in 1945, Dr. Charles A. Prosser forwarded a resolution which emphasized the need for life adjustment education for that 60 percent of youth in high school who were not being prepared for entrance into colleges or into skilled occupations.

This started the new term, "education for life adjustment." Subse-

⁸ "Evaluating the Curriculum for Provision for Meeting the Imperative Needs of Youth," *Bulletin of the National Association of Secondary School Principals*, Washington, National Education Association, April, 1948, pp. 48-69.

quently, many meetings were held by the vocational groups. The idea spread to most educational groups and led to forming a Commission on Life Adjustment Education for Youth. Your state department of education has probably issued many bulletins explaining education for life adjustment.

The goals to be achieved in the life adjustment program go little beyond the Ten Imperative Needs of Youth. Subsequent literature related to it indicates that much reorganization of curriculum and improvement of teaching methods are needed to make the program operate effectively. Supervised work activities by many high school students are strongly recommended.

To achieve the goals of education, the teacher needs more than acquaintance with them and desire to reach them. Understanding and desire are necessary as a starting point. From there the job is to develop the competence to make the goals become realities in the classroom. What kinds of understandings, attitudes, and skills must be built to achieve them through classroom instruction?

TEACHING COMPETENCE TO ACHIEVE THE GOALS

After years of hard work and persistent effort involving many individuals, a group of educators in the western states,⁹ particularly California, outlined a series of competences to serve as guides for assisting prospective teachers and teachers in service to build effective classroom practice. Representative groups interested in education—students, parents, prospective teachers, teachers in service, administrators, and college personnel—had a share in contributing their ideas concerning what makes an effective teacher. Over a thousand different studies concerned with the problem of successful teaching were analyzed by graduate students at Stanford University, and scientific investigations were conducted in each course of the teacher-education program along with community-school projects. From this comprehensive study emerged the "California Statement of Teaching Competence."

⁹ Representatives from most of the forty-eight states and many foreign countries eventually became participants in this study. The University of Denver, San Francisco State College, Colorado State College of Education, and Stanford University are some of the institutions where the "California Statement of Teaching Competence" serves as a guide in organizing teacher-education courses.

As you read the statement in abbreviated form, do this: In front of each number place an *H* to indicate that you think it is highly important for successful teaching, an *M* to indicate moderately important, a *U* to indicate unimportant, or a *?* to indicate that you do not understand what is meant or how it applies to your area of teaching.

A. The competent teacher provides for the learning of students.

1. Uses psychological principles of learning.
 - (a) Uses effective and continuing motivation.
 - (b) Organizes varied learning activities to meet student interests and needs.
 - (c) Directs learning activities according to a sequential, developmental pattern.
2. Uses principles of child growth and development in learning situations.
 - (a) Provides differentiated activities and assignments to meet the needs and abilities of students.
 - (b) Knows the health (mental and physical) status of his students and adapts activities to their needs.
3. Maintains an atmosphere in the classroom that is conducive to learning and is marked by a sense of balance between freedom and security.
 - (a) Maintains an effective working situation.
 - (b) Provides opportunities for students to cooperate and to exercise leadership in the activities of large and small groups.
 - (c) Provides opportunity for expression of independent critical thought with emphasis on freedom of expression and open-mindedness.
4. Plans effectively.
 - (a) Aids the students to define worthwhile objectives for large units, daily class work, and special class activities.
 - (b) Organizes his teaching well by choosing wisely learning experiences, subject matter content, and materials of instruction.
5. Uses varied teaching procedures.
 - (a) Uses teaching procedures (such as group reporting, discussion, planning with pupils) designed to achieve desired purposes in teaching.
 - (b) Builds effectively upon the students' participation in class activities.

- (c) Develops study skills of students.
 - (d) Stimulates creative activities of students.
 - (e) Aids the students to evaluate their own achievements.
6. Uses diagnostic and remedial procedures effectively.
- (a) Is familiar with common diagnostic tests in his own and related fields.
 - (b) Constructs, administers, and interprets diagnostic tests.
 - (c) Uses other appropriate diagnostic procedures.
7. Uses adequate procedures for evaluating the achievement of students.
- (a) Uses informal evaluation procedures (anecdotal record, interview, questionnaire) for collecting and interpreting needed information.
 - (b) Uses standard achievement tests.
 - (c) Uses teacher-made tests.
 - (d) Keeps accurate and adequate records, e.g., case studies, cumulative records.
 - (e) Makes effective reports to students and parents concerning the progress of students in their growth.
8. Manages the class effectively.
- (a) Plans satisfactory routine for the handling of materials, equipment, and supplies.
 - (b) Uses own and pupils' time effectively.
 - (c) Is attentive to the physical well-being of students in such matters as heating, lighting, ventilation, and seating.
- B. *The competent teacher counsels and guides students wisely.*
1. Uses sound psychological principles concerning the growth and development of children in guiding individuals and groups.
- (a) Maintains objectivity when dealing with behavior that is aggressive and abnormal.
 - (b) Is sympathetic with and sensitive to students' personal and social problems as well as their academic needs.
 - (c) Makes adjustments in the curriculum and other requirements in light of pupils' needs.
 - (d) Secures sufficient rapport with students so that they come voluntarily for counsel.
 - (e) Collects and uses significant counseling data as aptitude and intelligence test results.
 - (f) Uses suitable counseling procedures.

2. Maintains effective relationships with parents.
 - (a) Explains the needs, abilities, interests, and problems of the students to their parents.
 - (b) Obtains cooperation from parents in helping students with their problems.
- C. *The competent teacher aids students to understand and appreciate our cultural heritage.*
 1. Organizes the classroom for effective democratic living.
 2. Directs individuals and groups to significant life applications of classroom learnings.
 - (a) Uses subject fields to develop understanding of social, economic, and political problems.
 - (b) Develops an understanding of the wide significance of various fields of subject matter.
 3. Draws on his own background of experiences to elicit the cultural growth of individuals and groups.
 4. Helps students to know and to apply in their daily lives the democratic principles which are rooted deep in our historical development.
- D. *The competent teacher participates effectively in the activities of the school.*
 1. Plans cooperatively the means of achieving educational objectives.
 - (a) Shares effectively in curriculum revision and is able to evaluate progress toward attaining educational objectives.
 - (b) Shows flexibility in modifying his plans and procedures to fit with those of the entire school.
 2. Assumes his share of the responsibility for school activities.
 - (a) Carries out effectively the administrative responsibilities delegated to him.
 - (b) Participates in planning and administering extra-curricular activities.
 - (c) Maintains harmonious personal relations with his colleagues.
- E. *The competent teacher assists in maintaining good relations between the school and the rest of the community.*
 1. Acquaints himself with available community resources and uses them in classroom activities.
 2. Obtains the cooperation of parents in school activities.
 3. Aids in defining and solving community problems.
 4. Takes part in community affairs and projects.

5. Observes professional ethics in discussing school problems particularly with lay persons.
- F. *The competent teacher works on a professional level.*
1. Gives evidence of the social importance of the profession to parents, students, and other members of the profession.
 2. Adheres to a professional code of ethics.
 3. Contributes to the profession by membership in professional organizations and participation in their activities.
 4. Assumes responsibility for his own professional growth by planning an appropriate program for professional betterment.
 5. Aids in supervising student teachers and in the orientation and induction of beginning teachers.¹⁰

This statement outlines competences which we may expect of the teacher with from three to five years of experience. It may constitute a group of goals toward which the prospective teacher strives and which he reaches through intensive study and persistent effort. The role of the teacher in assisting all youth to satisfy their imperative educational needs is not easy; but it brings to many teachers a great deal of personal satisfaction, and a large portion of the general public is coming to recognize the worth of such contributions to society.

SUMMARY

A first step in becoming an effective secondary teacher is to understand the general goals of secondary education in American life. The goals of education are identified and formulated in relation to societal needs and attempt to incorporate the will of the people at the present time and also their expectancies for the future as they relate to education. To understand recent statements of goals we must be aware of significant changes which have occurred in three major aspects of our life: our urbanized society, family living, and the secondary school itself.

The Ten Imperative Needs of Youth as originally stated by the Educational Policies Commission of the National Education Association and as clarified by the National Association of Secondary School

¹⁰ John U. Michaelis, Lucien B. Kinney, and Robert N. Bush, "The Evaluation of Student Teaching," *The Evaluation of Student Teaching, Twenty-Eighth Yearbook*, Lockhaven, Penna., The Association for Student Teaching, 1949, pp. 5-17.

Principals constitute an adequate statement of goals to be achieved in modern secondary schools. In essence the objective is to organize worthwhile educative activities for each youth which make him a well-adjusted individual performer and a socially conscious coöperating member of the social groups of which he is part. Group instruction in high schools may be organized and carried out to achieve this objective.

Specific understandings, skills, and attitudes are needed by teachers to achieve these goals. Especially must the teacher be effective in five areas: (1) guiding and evaluating student learning activities, (2) providing individual counseling and group guidance services, (3) assisting youth to understand and to appreciate our cultural heritage, (4) participating in school activities and maintaining good relations between school and community, and (5) conducting himself in all areas of activity in a professional manner. The remainder of this book is concerned with helping you to build these necessary understandings, skills, and attitudes.

QUESTIONS AND ACTIVITIES

1. In what ways has urbanization of society affected life in America? How are the changes brought about by urbanization reflected in your own life?
2. In what important ways has the family changed, 1890 to the present? How does change in family living affect secondary education?
3. How has the secondary school changed, 1890 to the present?
4. What is the relationship between social change and the goals of secondary education?
5. What are the main differences between the goals as stated by the Committee of Ten and by the Commission on the Reorganization of Secondary Education?
6. Examine the books of the American Youth Commission. What are the major findings in each?
7. How does general education differ from education to prepare for a specific vocation? Can all high schools offer both? If not, which should come first? Why?

8. What are the major difficulties encountered in keeping all youth in school till graduation?
9. How could the Ten Imperative Educational Needs of Youth be improved as a statement of general goals for secondary education? Are any areas of learning neglected or given insufficient attention? Is any group of youth neglected in the statement?
10. What is meant by a teaching competence? Select any competence listed. What understandings, skills, and attitudes are needed to carry out the competence?
11. Review the six major competences related to teaching which were listed. Do you think that each is needed to achieve the goals?
12. From the entire list of competences, select those which you think are most important for teaching success.

REFERENCES

-
- Basler, Roosevelt, *Report of the National Conferences on the Prosser Resolution*, Washington, U.S. Office of Education, June, 1947.
- Bell, Howard M., *Youth Tell Their Story*, Washington, American Council on Education, 1938.
- Caswell, Hollis L. (ed.), *The American High School*, New York, Harper & Brothers, 1946, chap. 2.
- Commission on Life Adjustment Education, *Life Adjustment Education for Every Youth*, Washington, Federal Security Agency, U.S. Government Printing Office, 1948.
- Commission on the Reorganization of Secondary Education, *Cardinal Principles of Secondary Education*, Washington, U.S. Government Printing Office, 1918.
- Educational Policies Commission, *Education for All American Youth*, Washington, National Education Association, 1944.
- Educational Policies Commission, *Education of the Gifted*, Washington, National Education Association, 1950.
- Educational Policies Commission, *Moral and Spiritual Values in Public Schools*, Washington, National Education Association, 1951.
- Educational Policies Commission, *Policies for Education in American Democracy*, Washington, National Education Association, 1946.

- Educational Policies Commission, *The Purposes of Education in American Democracy*, Washington, National Education Association, 1938.
- Edwards, Newton, *Equal Educational Opportunity for All Youth: A National Responsibility*, Washington, American Youth Commission, American Council on Education, 1939.
- "Evaluating the Curriculum for Provision for Meeting the Imperative Needs of Youth," *Bulletin of the National Association of Secondary School Principals*, Washington, National Education Association, April, 1948, pp. 48-69.
- Harvard Committee, *General Education in a Free Society*, Cambridge, Harvard University Press, 1945, chap. 2.
- "The Imperative Needs of Youth of Secondary School Age," *Bulletin of the National Association of Secondary School Principals*, Washington, National Education Association, March, 1947.
- Kingsley, C. D., *Report of the Committee of Nine on Articulation of High School and College*, Washington, National Education Association, 1911.
- Krug, Edward A., *Curriculum Planning*, New York, Harper & Brothers, 1950, chap. 2.
- National Association of Secondary School Principals, *Issues of Secondary Education*, Washington, National Educational Association, 1936.
- National Association of Secondary School Principals, *Planning for American Youth*, Washington, National Education Association, 1944.
- National Education Association, *Report of the Committee of Ten on Secondary School Studies*, New York, American Book Company, 1894.
- National Education Association, *Report of the Committee of Fifteen on Education*, New York, American Book Company, 1895.
- National Education Association, *Report of the Committee on College Entrance Requirements*, Chicago, University of Chicago Press, 1899.
- National Education Association, *Report of the Committee of the National Council on Economy of Time in Education*, Washington, U.S. Government Printing Office, 1913.
- North Central Association of Colleges and Secondary Schools, *General Education in the American High School*, Chicago, Scott, Foresman and Company, 1945.
- Spaulding, Francis T., *High School and Life. A Report of the New York Regents' Inquiry*, New York, McGraw-Hill Book Company, 1939.

CHAPTER 2

The Nature of Adolescents

The first concern of the teacher is the boys and girls being taught. Before materials of instruction can be organized effectively, it is necessary to determine the nature of the boys and girls who will do the learning. There is no teaching except as boys and girls learn. Learning is a process of organizing experiences into meaningful patterns of understanding and action, in which process each adolescent must actively engage in order to profit from instruction. We do not expect students to sit quietly while physically inactive and mentally bored. If the teacher does not plan for interesting activities, "discipline" problems will surely arise. Student activity, mental and physical, must be guided in desirable directions by the teacher. A basic competence in professional teaching is understanding the adolescent. Three things may be done to gain a better understanding of boys and girls: First, learn how to interpret human behavior in general; second, learn the needs which are characteristic of most adolescents in our society; and third, develop skill in studying particular adolescents.

INTERPRETING HUMAN BEHAVIOR

Some generalized principles have emerged which are useful in learning to understand human behavior. Understanding human behavior is one of the major problems of our times in all aspects of life and particularly in teaching. If we understand human behavior, we can predict how human beings will conduct themselves in many situations and can plan activities which direct conduct in a desirable manner.

Adolescence is a stage in the human sequence of growth to maturity and has special characteristics; one who would teach adolescents needs to understand their development and know how to attain good results with them.

ACTIVITY IS DIRECTED TOWARD SATISFYING NEEDS

At birth the human infant has a well-defined set of biological needs which must be satisfied if he is to continue life. Besides these, he has a growth potential or maturational pattern which unfolds as his biological needs are satisfied. As the infant matures in human society, needs other than biological develop. They are a product of learning and maturation and may be called social. They are determined by the particular family, neighborhood, and culture in which the child grows. In our society six social needs are recognizable under two general headings: dependency needs and mastery needs. Dependency needs include the giving and receiving of affection, being accepted and approved by the members of a social group, and feeling secure within social groups such as the home, the classroom, and informal play groups. Mastery needs include making decisions and carrying out purposes, maintaining self-esteem, and achieving superiority over environmental barriers. Social needs may be as strong as biological needs in directing activity. Starving to death rather than stealing food demonstrates the extent to which the mastery need for maintaining self-esteem may be stronger than the biological need for food.

The whole educative process in the home and school is designed to lead from dependence on adults to greater dependence on self. As the individual matures he needs less assistance from adults. Because he is human his social needs always remain. They become increasingly important in directing activity as mastery over biological needs increases. To understand conduct, we must first discover what need the individual is attempting to satisfy through the particular activity in which he is engaged.

MATURATION AFFECTS BEHAVIOR

Maturation is defined as growth under normal stimulating conditions. Each individual has his unique rate of growth, which is mostly

determined by heredity, but all human beings go through a common sequence in maturing.

Under ordinary circumstances, all children sit upright before they stand, stand before they walk, and walk before they skip or hop. Talking precedes reading and reading comes before writing and spelling. Among girls maturing through late childhood and adolescence this sequence is characteristic: the pituitary gland causes growth in ovaries, the ovaries grow and secrete hormones, pubic hair appears, the menstrual cycle begins, and ovulation follows.

Wide variations exist in the age at which individuals reach the different stages in the sequence and also in final maximum growth. As stated earlier, the rate and maximum potential for growth are largely determined by hereditary factors. Experience has shown that parents cannot induce their children to walk at an earlier age through giving them special diet and practice; obviously walking can be delayed through starving the child or restraining him from normal movement. One child walks at nine months of age; another at eighteen. Both children are normal but have different maturational patterns. No one would try to hasten or delay the beginning of puberty in children. Normal individuals reach this development stage anywhere between nine and sixteen years of age.

It is important that teachers understand where the adolescent is maturationally because his present level of growth provides the basis for deciding his conduct and what he is ready for at a given time. Parents waste much effort in trying to get a child toilet trained before he is mature enough to master the task. First-grade teachers lose much valuable time in trying to get some children to read before they are sufficiently mature. Secondary teachers set up many common standards of behavior and learning requirements for all members of a class without discovering first what variations exist among the adolescents in maturation. Adolescents in different stages of maturity are expected to exhibit wide variability of conduct. The intensity and quality of their needs and methods for satisfying them change with maturity.

ADJUSTMENT PROBLEMS ARISE WHEN NEEDS ARE NOT SATISFIED

The need with its resultant tension constitutes the motivation for action which follows. Activities are pursued to relieve the tension. If

an activity leads quite directly to satisfaction of the need, no adjustment problem develops because the tension is relieved. However, when the goal is not reached, the need and tension are not lessened, so the individual experiments with different kinds of activities. When no activities are fruitful, an adjustment problem arises; the individual still has to satisfy the need. At this point professional guidance and understanding are extremely important for here is the source of most discipline problems. When for some reason, usually controllable by the teacher, students cannot satisfy their needs through activities socially approved, they engage in some form of behavior which satisfies their individual needs whether or not the teacher and others approve.

For example, an adolescent needs to be accepted by members of his class and by the teacher. He goes into the classroom and finds that for some reason, unknown to him, others ignore him completely or look at him askance. This behavior on the part of others continues. During this time tension builds. When the tension is sufficiently great, he tries socially approved ways of getting incorporated into the group. Failing, he tries other ways. The two most typical kinds of reaction then are aggressiveness against the members of the group, including loud talk, boisterousness, and destructiveness, and withdrawing from reality into daydreaming and fantasy wherein he becomes the most popular member of the group. Extreme forms of withdrawal include truancy and quitting the class and the school.

What are some of the factors which block need satisfaction? Physical factors such as lack of sufficient food or water within an area constitute one kind of block. Most restraints upon needs, particularly of adolescents, come from adults and age mates. Unsatisfactory curricula, requiring students to sit quietly for long periods of time, taking away privileges, rules and regulations—any of these which the adolescent cannot accommodate to satisfy his needs constitute social blocks. Individuals find within themselves real or imaginary blocks to need satisfaction. The short boy may not make the basketball team; the tall girl may not get dates; the crippled child feels so different that he may not achieve normal social relationships. Thus, conditions which may serve to block need satisfaction exist within the physical environment, the social environment, and the individual himself.

The seriousness of any adjustment problem depends on how basic the need is, how long the need has been felt, and how aware the individual is of the need and the source of the block. One does not have to experience suffocation, hunger, or thirst long to recognize how the three factors affect the adjustment problem. With social needs, it is often difficult to analyze these three aspects of another person's adjustment. A most difficult job of the teacher is to try to understand the adolescent well enough to analyze his problems from his point of view. His adjustment problems, however, and his conduct in the classroom become more clearly comprehended when this is done. Part of the answer to preventing delinquency and school dropouts is thus discovered.

This psychological interpretation—that need directs activity and causes adjustment problems—makes human behavior understandable. The conduct of an individual, however meaningless and irrational it may appear to us, is his most rational reaction to an adjustment problem.

INDIVIDUALS ATTEMPT TO MEET PROBLEMS INTELLIGENTLY

Most human beings possess the distinctive characteristic of a highly developed neural structure which enables them to reason. They have the potential for learning how to solve their problems intelligently. How the maturing adolescent exercises his intelligence to satisfy his needs depends in part on what he inherits but more on what he learns. If, for example, as a small infant, he learns that only through prolonged and violent crying can he gain attention from parents, then this may be his learned pattern of intelligent activity. If temper tantrums gain desired ends, then having temper tantrums will persist. If a high school boy found that in the elementary school he could gain needed attention from classmates only by throwing paper wads, to him this might be his most intelligent way of responding in junior high school classrooms. If a mature woman finds that she can satisfy her needs most satisfactorily and with least effort through crying, then crying may be her most intelligent response. Difficult as it may be to accept, the particular pattern of behavior in which an individual engages in a specific situation constitutes his most reasonable and intelligent response in that situation. This statement by no means denies the fact that emotions and

well-established habits are powerful determinants of behavior. It does, however, subsume that both emotional and habitual patterns of behaving are learned. And in the learning process, whenever it came, the individual did what he thought was most rational at that time.

With maturity the individual develops increasing ability to define problems, to find solutions, and to carry out the solutions in an intelligent manner. Thus, he can modify his environment through intelligent behavior. He is not required to adapt to the environment or die as must plants and most animals. Mutation and extinction due to non-adaptation are commonly found in plant and lower animal life. Neither of these occurs in human beings because of their superior capacity for intelligent behavior.

ALL BEHAVIOR IS CAUSED

Every individual has needs and a maturational pattern which influences conduct. Hereditary and environmental forces are in constant interaction to shape the direction of growth and learning. Need satisfaction, influenced by both heredity and environment, leads to all human activity. Every activity is thus the product of one's particular heredity, his maturational pattern, and the learning which he has already experienced. The behavior patterns which emerge in ordinary living and in specific situations have origin and cause.

The causes of an adolescent's behavior are often difficult to discover, but discovery must be attempted in order to understand him. In some cases psychiatric assistance is required. Many behavioral patterns may be explained if causes are sought. A fifteen-year-old boy was an alert, bright student in morning classes. In afternoon classes he was uninterested, unresponsive, and apparently needed more sleep or rest for he had no energy for physical activities. This youth was sent to a physician, who discovered an allergy to chocolate. When the boy discontinued eating chocolate candy for lunch, his afternoon behavior improved markedly. There are countless other youth whose conduct appears unexplainable. Often, and with much interest, the causes therefor can be found with relatively little effort on the part of the teachers.

The teaching profession, like the medical, operates on the assumption that causes are discoverable. Symptoms are merely indicators of the

underlying causes. Bullying, lying, cheating, destructiveness, and the like indicate that something is wrong; somewhere a need has not been satisfied in a socially approved manner. To treat symptoms such as these is futile; to analyze them, discover the causes, and eliminate the causes is the key to preventing and overcoming maladjustment.

THE DEVELOPMENTAL TASKS OF ADOLESCENCE

Robert J. Havighurst has made important contributions toward identifying and defining developmental tasks as a frame of reference in which to study human behavior and to plan educational programs related to the characteristics of human beings from infancy through adulthood. He has grouped developmental tasks according to maturity levels: early infancy and childhood, middle childhood, adolescence, early adulthood, middle age, and later maturity.¹

A developmental task is a learning problem which an individual meets because he is maturing in our society. Our society demands among other things that the adolescent during the approximate ages twelve to twenty (1) accept his own physique and physical characteristics, (2) learn new and satisfactory ways for getting along with age mates of both sexes, (3) learn new and satisfactory ways for getting along with adults, (4) achieve emotional maturity, (5) achieve a measure of economic independence, (6) achieve a degree of intellectual maturity, and (7) build a more or less permanent philosophy of life in harmony with values which our society upholds. These tasks appear with biological development beginning in adolescence and are common to most adolescents in our society. Each task or learning problem must be solved if the individual, upon reaching adulthood, is to be relatively well adjusted and able to carry out his adult role efficiently and happily in the home, neighborhood, state, and nation.

We shall examine these seven developmental tasks in more detail after a brief survey of the general characteristics of adolescence.

WHAT IS ADOLESCENCE?

Adolescence is the last period in the sequence of human growth from immaturity to maturity. During the period occur the biological process

¹ Robert J. Havighurst, *Development Tasks and Education*, Chicago, University of Chicago Press, 1948.

well-established habits are powerful determinants of behavior. It does, however, subsume that both emotional and habitual patterns of behaving are learned. And in the learning process, whenever it came, the individual did what he thought was most rational at that time.

With maturity the individual develops increasing ability to define problems, to find solutions, and to carry out the solutions in an intelligent manner. Thus, he can modify his environment through intelligent behavior. He is not required to adapt to the environment or die as must plants and most animals. Mutation and extinction due to non-adaptation are commonly found in plant and lower animal life. Neither of these occurs in human beings because of their superior capacity for intelligent behavior.

ALL BEHAVIOR IS CAUSED

Every individual has needs and a maturational pattern which influences conduct. Hereditary and environmental forces are in constant interaction to shape the direction of growth and learning. Need satisfaction, influenced by both heredity and environment, leads to all human activity. Every activity is thus the product of one's particular heredity, his maturational pattern, and the learning which he has already experienced. The behavior patterns which emerge in ordinary living and in specific situations have origin and cause.

The causes of an adolescent's behavior are often difficult to discover, but discovery must be attempted in order to understand him. In some cases psychiatric assistance is required. Many behavioral patterns may be explained if causes are sought. A fifteen-year-old boy was an alert, bright student in morning classes. In afternoon classes he was uninterested, unresponsive, and apparently needed more sleep or rest for he had no energy for physical activities. This youth was sent to a physician, who discovered an allergy to chocolate. When the boy discontinued eating chocolate candy for lunch, his afternoon behavior improved markedly. There are countless other youth whose conduct appears unexplainable. Often, and with much interest, the causes therefor can be found with relatively little effort on the part of the teachers.

The teaching profession, like the medical, operates on the assumption that causes are discoverable. Symptoms are merely indicators of the

underlying causes. Bullying, lying, cheating, destructiveness, and the like indicate that something is wrong; somewhere a need has not been satisfied in a socially approved manner. To treat symptoms such as these is futile; to analyze them, discover the causes, and eliminate the causes is the key to preventing and overcoming maladjustment.

THE DEVELOPMENTAL TASKS OF ADOLESCENCE

Robert J. Havighurst has made important contributions toward identifying and defining developmental tasks as a frame of reference in which to study human behavior and to plan educational programs related to the characteristics of human beings from infancy through adulthood. He has grouped developmental tasks according to maturity levels: early infancy and childhood, middle childhood, adolescence, early adulthood, middle age, and later maturity.¹

A developmental task is a learning problem which an individual meets because he is maturing in our society. Our society demands among other things that the adolescent during the approximate ages twelve to twenty (1) accept his own physique and physical characteristics, (2) learn new and satisfactory ways for getting along with age mates of both sexes, (3) learn new and satisfactory ways for getting along with adults, (4) achieve emotional maturity, (5) achieve a measure of economic independence, (6) achieve a degree of intellectual maturity, and (7) build a more or less permanent philosophy of life in harmony with values which our society upholds. These tasks appear with biological development beginning in adolescence and are common to most adolescents in our society. Each task or learning problem must be solved if the individual, upon reaching adulthood, is to be relatively well adjusted and able to carry out his adult role efficiently and happily in the home, neighborhood, state, and nation.

We shall examine these seven developmental tasks in more detail after a brief survey of the general characteristics of adolescence.

WHAT IS ADOLESCENCE?

Adolescence is the last period in the sequence of human growth from immaturity to maturity. During the period occur the biological process

¹ Robert J. Havighurst, *Development Tasks and Education*, Chicago, University of Chicago Press, 1948.

of reaching adult physique, the cultural process of becoming a self-directive, contributing member of society, and the psychological process of achieving mental and emotional maturity. The amount of time spent in achieving mature adult status varies from one culture to another. In our culture this transitional period from childhood to adulthood cannot be set off by any average chronological age. Growth is continuous and growth periods do not have sudden or sharp breaks showing the individual as a child today and as an adolescent or adult tomorrow. Sudden transformations do not take place.

The adolescent period from the physical aspect, not the cultural, is usually marked by two characteristics. It begins when the sex organs start their more rapid growth and induce appearance of secondary sex characteristics including puberal hair. It ends with complete maturity of the sex organs and achieving of mature height. There is wide variation among individuals, at least seven years, in beginning this development. Equally wide is the variation in reaching physical maturity. Thus, we find that average age has little value in understanding a specific individual. When other indexes such as social and emotional maturity are employed, the range is appreciably wider; average age becomes even less useful for understanding a specific individual. Some adolescents at age fifteen are more emotionally mature than other persons are at age twenty-five.

Our society has tended to induce more rapid physical maturation and at the same time has delayed the achieving of social and economic independence. We have the longest period of adolescent dependence upon adults of any society in the history of mankind. Most adolescents are unable to support themselves, singly or married, until many years after physical maturity has been reached. Therefore, adolescence for most youth extends far beyond achievement of physical maturity.

Adolescence is not a period of violent changes or difficulties. Rather it is a period of change in which dependence upon adults gives way over a period of years to independence. Many adolescents do not find their problems more or less difficult than the problems of childhood or early adulthood. The developmental tasks of the latter period are about as difficult and numerous as those of adolescence, which are now discussed.

UNDERSTANDING AND ACCEPTING OWN PHYSIQUE

When the ovaries in the female and the testes in the male start their rapid growth, secondary sex characteristics begin to appear. In the girl, most pronounced of these are the appearance of pubic hair, development of the breasts, and widening of the hips. In the boy, puberal hair appears, the voice deepens, the chest widens, and the beard grows. In early adolescence boys and girls usually begin a sharp increase in height, weight, and strength. Increase in height comes primarily through growth of the legs. Weight increase tends to produce fatty tissue in the breast region, hips, and lower front of abdomen. To understand these changes and to accept them as part of the growing-up process is a major need of adolescents because adjustment problems arise in three areas connected with physical maturation: change in size, in proportion, and in function.

Actual size is an important factor in determining attitudes toward self and others. To have grown very slowly in height and weight for many years and then to reach adult stature in a period of one to three years presents many problems. Not to grow when other classmates do leads to greater difficulties. Adolescents with the most severe problems related to size may be grouped into four categories: (1) early developers, e.g., the girl in the fifth grade who at ten years of age begins the menstrual cycle; (2) late developers, e.g., the senior in high school who has not yet shaved; (3) boys who at maturity remain considerably below the average in height and strength; and (4) girls who at maturity are considerably taller or heavier than the average. The latter two are problems peculiar to adolescents in our culture, mainly because we give so much prestige and status to tall, strong athletes in competitive athletic events and to medium-height, slim girls in our popularity and beauty contests of all kinds.

Change in proportion is closely related to size in so far as the developmental sequence is concerned. During early adolescence for both boys and girls, arms and legs increase in length quite rapidly. The boys' shoulders widen and proportionately the hips become slender. Among girls the breasts enlarge and the hips widen. The ideals of masculinity and of femininity which adolescents have set for themselves and for

others in their groups are important learnings and at the same time constitute sources of adjustment problems. The girl whose heritage leans to tall, heavy, small-breasted maturity may isolate herself from the group after dieting, exercise, and patent medicines have failed to alter growth patterns. The short, fat, narrow-shouldered boy and the extremely tall, skinny one have equally difficult adjustments to make. Nicknames—"Skinny," "Shorty," "Fatty," and "Flabby"—often develop in shower rooms of both junior and senior high schools. They provide a rough indication of the extent to which youth are made aware of their physical differences.

Changing function of organs is an amazing product of adolescent maturation. Sweat glands begin profuse activity. Sex organs, heretofore dormant, commence secreting. The first menstrual period and the first nocturnal emission are hard to understand in themselves. The idea of being capable of reproduction is difficult to grasp by adults; it is much more so for youth at fifteen years. Understanding the whole process of reproduction is an important need of adolescents. Help in meeting and understanding changes in function can be provided for in the home and in the school. This need is too important to be neglected. To neglect it constitutes a serious weakness in helping adolescents develop into normal adults.

An interesting investigation, conducted by Stolz and Stolz,² yielded useful information for teachers. In a group of ninety-three adolescent boys and eighty-three girls, 31 percent of the boys and 41 percent of the girls were found to have suffered anxieties concerning physical factors in their development. Six physical manifestations which disturbed boys most frequently were: lack of size (particularly height), fatness, poor physique, lack of muscular strength, unusual facial features, and unusual development in the nipple area. For the girls the order was as follows: tallness, fatness, facial features, general physical appearance, tallness and heaviness, and smallness and heaviness.

Understanding and accepting physique is important to adolescents. Physical development provides the foundation for other development.

² Herbert R. Stolz, and Lois M. Stolz, "Adolescent Problems Related to Somatic Variations," in National Society for the Study of Education, *Adolescence Forty-Third Yearbook* Chicago, University of Chicago Press, 1944, Part I, pp. 86-88.

Not to be satisfied with one's own physique constitutes a serious adjustment problem and affects all other development.

DEVELOPING SATISFACTORY RELATIONSHIPS WITH THE OPPOSITE SEX

Closely related to accepting physique is the need for developing social skills to establish good relationships with the opposite sex. Prior to the pubescent period, it is typical for boys to associate with other boys and for girls to associate with other girls in informal groups called "gangs." Frequently the two groups relish antagonizing each other. Thus, when the powerful sex need becomes felt with maturity, both boys and girls find themselves with few previous success experiences in relations with the opposite sex. They must learn new skills and attitudes to get along with each other in a mixed group, the "crowd." Adolescents in learning new skills behave somewhat as do adults except that they have fewer experiences upon which to draw. We may illustrate the sequence of learning a new social skill with the case of John.

John actively engaged in games with other boys in later elementary school and throughout the seventh and eighth grades. He was a leader in football games, in rough-and-tumble activities of all kinds. Other boys admired him for his strength and skill; they accepted him as their leader on the playground and in the neighborhood gang.

Toward spring in the eighth grade puberal hair started appearing, and during the summer John grew over two inches. Coming to school in the fall, he found that girls, whom he had scarcely noticed before and who he thought were silly, were very much different. Something had happened to them, too.

John, for some reason vaguely understood by himself, now wants to know these girls better. What does he do? He first tries those things which have worked with the gang of boys. He relies upon previously established patterns of behavior. These do not work. Therefore, he must attempt something else so he experiments, doing what he thinks is best. He may pull hair, scuffle with the girls, or spend class periods picking wool from the sweater of the girl sitting in the next seat. He may, with blushing face and perspiring forehead, ask her to meet him after school for a soda.

If he persists in this exploration and finds that certain approaches lead to getting better acquainted, then they become part of his learned way of behaving until some better skill is developed. If he does not meet with any success, he is likely to do either of two things: become aggressive and take out his aggressions against the girls, the teacher, and other classmates or else withdraw from his attempts, particularly into daydreaming or the reading of pulp literature.

And what have the teachers been doing to help John with his problem? When teachers recognize that making satisfactory adjustment to the opposite sex is a basic need of adolescents, that youth must solve this problem if they are to profit most from the academic side of school, they provide in their classroom many opportunities for boys and girls to associate with one another on a friendly basis. To rule out classroom interaction between boys and girls in satisfying this basic need contributes to maladjustment. The teacher who does not allow adolescents to develop social skills in the classroom places a social block in the path of adolescent need satisfaction.

Typically, developing good relations with the opposite sex goes through this sequence for normal adolescents: First, they become interested in the opposite sex, particularly aspects of physical change; second, they have a first date—this is often a bewildering experience and is accompanied with much anxiety; third, they have dates with several different adolescents, experiment widely, and fall in and out of love frequently; fourth, the number of different individuals dated decreases and "going steady" is common; and fifth, a marriage partner is selected. All of these are important learnings. The high school teacher who helps adolescents solve these problems contributes greatly toward building better school relations and, ultimately, better home life.

ESTABLISHING NEW RELATIONS WITH ADULTS

As boys and girls mature, they seek greater independence from parents and other adults. The adolescent, taller and stronger than his mother and also perhaps than his father, now wants psychological freedom from the restraints so long imposed upon him by virtue of parental physiological superiority. From infancy through childhood parents have been saying, "You can't drive the car as we do; you can't

drink or smoke as we do; these things you may do when you grow up to be a big man or mature woman."

Now the adolescent has reached that promised age or thinks he has. In many cases he has not because his parents have not grown with him by changing their attitudes. Loving and wanting to continue protecting the child, the parents attempt to hold him for a few more years—at least until high school graduation. To avoid physical violence, economic means are frequently employed to keep the adolescent psychologically dependent. Youth coming from homes where parents have not given them increasing opportunity to develop independence and self-control frequently react to teachers with the same attitudes they have toward their parents simply because teachers, too, symbolize adult domination. The boy who has been severely criticized by his father at the breakfast table for driving the car too recklessly responds negatively to his music teacher, who criticizes him for not having practiced an assignment or selection. The girl whose mother has reprimanded her for buying a form-fitting skirt responds negatively to the English teacher's suggestion that Lady Olivia concealed her beauty with ruffles.

Teaching requires that, especially with adolescents, crises be avoided between teacher and adolescent. As with developing new social skills, adolescents need to work out ways for getting along better with parents and other adults. They themselves feel that they are adults and should be treated as adults; but they do not have the requisite skills, nor do adults give them many opportunities for behaving in a grown-up manner. Adolescents need to learn a new relationship with parents—one which involves mutual affection and respect plus increasing independence for making decisions. Age mates of the opposite sex have now replaced parents as primary objects of affection. One way in which the teacher can help youth meet this problem is to set up activities in which adolescents learn to assume responsibility for their behavior with less and less control by the teacher. A most effective way to prevent satisfaction of this need is for the teacher to dominate the adolescent and give him no opportunity for establishing adult associations with the teacher and with age mates in the classroom.

The common sequence in achieving independence from parents is marked by these stages: First, the child approaching pubescence

follows parental commands without much rebellion; second, the early adolescent seeks independence in personal choice of clothing, speech, friends, and activities; third, age mates of the opposite sex replace the parent as primary source of affection; fourth, with more freedom and association with age mates there is less need for giving and receiving parental affection; fifth, plans and decisions are made in discussion with parents but not dominated by them; and sixth, economic independence marks the final step in achieving full freedom from parental control.

ACHIEVING EMOTIONAL MATURITY

It has often been stated that how one feels in a particular situation determines his behavior more than does his knowledge of what to do. The fact that this idea is generally accepted indicates the great need for helping adolescents learn to control emotional aspects of behavior.

Two factors operate during an emotional state: there is a physiological and a psychological reaction. When a person becomes angry, scared, or highly excited, through no voluntary or conscious action on his part internal changes occur in the body. The heart beats faster, digestive juices, including saliva, cease flowing, blood rushes from the visceral region to the muscles, the liver releases stored sugar, and the respiratory rate increases. The body uses more energy and eliminates waste at a faster rate. Perspiring palms and forehead, flushed face, increased strength, dry mouth, and trembling limbs result from these physiological changes and are usually called the overt or outward expression of emotion. To a limited degree, the outward expression can be controlled; the internal cannot.

The psychological aspect of emotion is described in terms of fear, anger, love, and shame, which denote the feeling accompanying the physiological state. The psychological aspect of emotions ranges in intensity from mild to disruptive. Mild emotion tends to stimulate wholesome activity. Frequent intense emotion and prolonged strong emotions are damaging to health and all forms of learning. One does not learn to solve arithmetic problems while intensely angry, nor does he do school work well when highly upset from fear of failure. When an intense emotional state like shame or anger is accompanied with a feeling of disorganization and unpleasantness, the individual usually learns to fear the situation in which it occurred. When pleasantness and

exhilaration are produced, the individual feels enjoyment and tends to reproduce the situations in which this feeling occurred. Thus, emotions act as motivational forces, serving to direct activity.

Maturing boys and girls, facing problems for which they have inadequate responses, frequently find themselves in situations wherein disruptive emotions are involved. However, the adolescent is expected to refrain from such behaviors as hitting and yelling when angry, running when afraid, and crying when ashamed. Emotional maturity demands that youth increasingly desist from relieving emotional tension through outward expression. This requirement, in turn, means that adolescents need to gain mastery over situations involving arousal of disruptive emotions for it is mentally and physically unhealthy not to relieve tensions once aroused. Unrelieved tensions which build up and which are not expressed outwardly produce serious maladjustment.

Teachers have an important role in assisting this kind of learning. In the first place, the teacher avoids situations which produce emotional crises. The flushed face, quavering speech, and trembling knees are warning signals that this adolescent is suffering and should be pushed no farther. Belligerent words and gestures directed toward the teacher or toward classmates mean "Stop." Nose bleeding and headaches during examinations mean acute emotional distress. Teachers are responsible for controlling the emotional atmosphere of the classroom and can maintain a healthy one.

Classroom activity directed toward assisting boys and girls to build the following competences will facilitate growth toward emotional maturity: first, understanding socially approved methods for relieving emotional tensions and substituting these for childish and disapproved methods; second, analyzing emotional situations objectively; third, gaining broader understandings of situations in which disruptive emotions are produced; fourth, building many social skills to meet new situations; and fifth, eliminating fears, phobias, and emotionalized patterns of response which are already firmly established.

ACHIEVING ECONOMIC INDEPENDENCE

A frequently overlooked need of the adolescent is that of gaining control over the means of livelihood. Significantly, this is the first of the Ten Imperative Educational Needs of Youth outlined in Chapter

1. Despite this importance given in the goals of secondary education, it is still one of the most neglected areas of secondary education.

As the boy approaches mature size and strength, he is expected to be and usually wants to be economically independent. An increasingly higher proportion of girls do also. American society places much pressure on men to be self-sufficient. To be employed and making one's own way is socially approved and a mark of respect and worth. To be unemployed or dependent upon others for support is degrading. To maintain self-esteem and to avoid guilt feelings, youth need to be self-sufficient, economically, within a relatively short period after reaching physical maturity.

At the same time that making one's own way and being independent are societal marks of success, our business and economic organization, except in times of war, has made it increasingly difficult for youth to secure work prior to age twenty-one. State regulations, national child labor laws, union rulings, and such have the effect of lengthening economic dependence upon adults. Length of college education necessary for entering professions and years of apprenticeship required for the crafts give further evidence that economic dependence lasts for many youth to the ages of twenty-five and thirty. For the many who cannot become educated at state or parental expense, economic independence is a most important need.

Achieving economic independence requires numerous kinds of learning, the most important of which are: first, understanding one's abilities; second, understanding different kinds of work toward which such abilities may be directed profitably; third, building general skills and understandings which prepare for many different kinds of work; fourth, experimenting with different kinds of work; fifth, selecting some field of work in which to develop special skills and understandings; and sixth, consuming wisely. All of these learnings require a period of years. The junior high school is none too early to commence field trips into the community to explore the various kinds of work activities through which adults make their livelihood and to start club and classroom activities in which youth learn to buy and spend. In the senior high school, continuation of these experiences and work-experience programs operate effectively to assist youth with this developmental task.

If all youth were convinced that attending classes in particular schools would enable them to secure such concrete things as better jobs, better clothing, and better homes, few would quit school prior to graduation. Teachers should help adolescents to develop the broad understandings, conduct, and attitudes which are necessary in all kinds of work. Specialized vocational counselors cannot do an adequate job of providing needed vocational guidance for all youth. Every teacher in every classroom assumes responsibility for relating learning activities, whatever they may be, with securing increasing control of the means of livelihood.

ACHIEVING INTELLECTUAL MATURITY

All youth possess potential for intelligent conduct and, according to the goals of secondary education and to the maturational pattern of adolescence, need to develop this potential. Investigations dealing with the study of intelligence show that somewhere between the sixteenth and twentieth birthdays individuals achieve their maximum mental growth; that is, the highest potential for learning is established during this period. This does not mean that greatest achievement is reached. The potential for achievement is established; what happens to the potential is largely determined by how it is employed.

There are three facts relative to mental maturity which differ markedly from those bearing on physical maturity. It will be recalled that, physically, girls mature on the average about two years earlier than boys. This difference does not hold true for mental development; so far as is known at the present time, boys mature mentally at the same rate as girls. Second, there is wide variation among individuals as to age of reaching physical maturity. No such wide variations have been found with respect to mental development. Third, age at which pubescence begins does not appear to affect final height; stated differently, the age at which the adolescent spurt in height comes does not determine final height. The boy who grows rapidly at twelve does not achieve greater height than does one who gets this spurt at age fifteen. The rate of mental growth and the final maximum can be ascertained at a relatively early age—five years or less. In other words, those who mature rapidly, mentally, maintain that pattern through adolescence to

maturity; those who mature slowly maintain their rate. This assertion is contradicted by a few researchers but is generally accepted and has not been disproved. It has special significance for teachers because, if they are to help the adolescent reach intellectual maturity, his present maturity level must be known. Since teachers work with groups as well as individuals, it provides the basis for understanding the differences in their classes. How wide are the differences in mental maturity? Two normal individuals, one with an IQ of 75 and another with an IQ of 133, at twelve years of age have reached mental maturity of the average nine-year-old child and sixteen-year-old adolescent, respectively. If these two remain in school, each year the teacher should expect them to show greater difference in mental maturity.

Within this context of greatly differing patterns of intellectual maturity found among all groups, we may explore the factors of achieving intellectual maturity. As the adolescent matures, he seeks to find causes and consequences. Instead of asking for adult explanations of questions and answers to problems, he seeks to discover them himself. As he has more experiences and information on which to base his answers and conclusions, he needs fewer ready-made solutions. Rules and regulations which were followed as a child without questioning need examination to discover the reasons for them. He is able to capitalize on his experiences and mental growth to become more self-directive.

With growth toward intellectual maturity, adolescents are able to organize more experiences into meaningful generalizations; they are able to concentrate for longer periods of time and use abstract materials with increasing comprehension; ability to memorize grows; and interests toward the end of the adolescent period become quite permanent. The potential for this intellectual maturity is present in varying degrees among all adolescents. The teacher needs to capitalize upon this potential by helping the adolescent project his plans and behavior farther into the future and intelligently guide his activities to achieve them.

BUILDING A PHILOSOPHY OF LIFE

On the basis of cumulative experiences which boys and girls undergo in meeting their problems, attitudes are built. Attitudes determine how an individual behaves in immediate situations. The feelings one has in

many and varied activities lend pleasantness or unpleasantness to his attitudes. Attitudes of what is right and wrong, good and bad, appropriate and inappropriate largely determine behavior in those situations where an individual must choose between two competing ways of behaving. Attitudes toward members of a different race, a different religion, or a different nationality determine how an individual behaves with such groups. When he has unpleasant feelings and reacts with intolerance toward individual members of these groups, his attitude is defined as one of prejudice. When the prejudice is firmly established so that he responds unfavorably to all members of a group without reference to specific characteristics of an individual within the group, his behavior is defined as stereotyped.

Ideals, too, grow out of the many experiences a person has. When he has had enough experiences to generalize them so that principles of behavior become established, these generalized principles become ideals which guide behavior in new situations and over long periods of time. With intellectual maturity, boys and girls project plans and behavior farther into the future and direct their activities toward achieving long-term goals. They need to develop ideals to govern direction of these activities in order that they may proceed with fewer conflicts in choosing what to do or what not to do. A small child, for example, respects the rights of others on the basis of what happens to him in given situations—whether he is rewarded or punished. The maturing adolescent respects the rights of others because he has learned that such respect is part of an approved and satisfying way of conduct. He has accepted respecting the rights of others as an ideal which guides his behavior, and no problem of choice is presented however often he may find himself in situations where he might or might not respect the rights of others.

Adolescents, as well as children, usually build their ideals along a developmental sequence through imitating the behavior of a respected and admired adult or age mate. In early childhood, prior to starting to school, the child identifies his sexual conduct with that of the parent of the same sex. In the early elementary school years teachers and acquaintances are frequently imitated. With the onset of puberty, adolescents tend to imitate the actions of the glamorous movie hero and

heroine, the bathing beauty, and the athletic star. As they read more widely and their interests broaden, the tendency is increasingly away from the glamorous person, parent, and teacher toward historical, fictional, romantic, and religious adults and toward age mates. With full maturity, youth are expected to have developed an integrated value system or philosophy of life wherein life goals are relatively well established and behavior follows a consistent pattern. This is a mark of maturity and is necessary for maintaining a well-adjusted personality.

Attitudes, values, and ideals are learned; they are not inherited. The high school student exhibits in his conduct what he has learned in the home, neighborhood, and school. It is crucial to remember that attitudes are emotionally toned, that prejudice and stereotyped behavior are highly emotionalized, and that ideals follow a developmental sequence which becomes relatively fixed with maturity. Because prejudiced and stereotyped behaviors are not rationally determined, they are extremely difficult to eradicate. Presentation of facts does not readily change the behavior of the girl with the stereotype that manual labor is degrading.

To assist adolescents in building a philosophy of life it is important that the teacher (1) provide a good example for students to follow, (2) help students examine prejudices and stereotypes, (3) present many opportunities to build desirable attitudes and values, and (4) help each adolescent in building values which are socially approved and satisfying to him.

INITIAL METHODS FOR STUDYING ADOLESCENTS

Sociometric techniques, anecdotal records of adolescent behavior in and outside the classroom, and analysis of school records provide three concrete but relatively quick and efficient ways for studying adolescent development and behavior. Sociometry is useful in analyzing individual and group relations; the other two techniques yield clues for understanding the individual. Data from the three sources may be combined to make an observational case study. It is recognized that no teacher can make a case study of each of one hundred students per semester. Also, one cannot keep daily anecdotal records for each student in five different classes. Analysis of cumulative records and administration of

sociometric tests are not highly time consuming and provide much data needed to understand adolescents. The extent to which these four procedures may be carried out are clarified in the more detailed discussion which follows.

THE SOCIOGRAM

Many teachers use the sociogram for seating students in a classroom, for organizing students in work groups in the classroom, for organizing work groups outside the classroom, and for gaining effective relationships with the whole group early after first meeting with them. Sociograms reveal to the teacher the interaction of the whole group, the patterns of friendship which exist, and the kind and intensity of interaction among individuals within the group. The popular members of the group, the isolated and rejected members, and the cliques can be identified. When the teacher knows the most popular members of the class—there are usually from three to six in classes of twenty-five to thirty-five—their coöperation can be secured with much assurance that the rest of the class will follow. When the isolated and rejected are located, the teacher knows who needs most help first in making a good adjustment to the classroom.

Administration of the Sociogram. Depending on the purpose of the sociogram, the teacher asks each student to write the names of his best friends in the class, students he would like to sit next to, students he would like to work with on a class project, or students he would like to work with in out-of-class activities. If the class is large, it is probably wise to ask each student to list three to five names. Some advantage is gained by placing no limit on the number of choices; more will then be revealed concerning the whole group. The teacher may allow students to include names of those whom they dislike or would not want to associate with in group activities.

The teacher makes sure that the students are protected from having their choices revealed to one another, that they have no opportunity for discussing their choices prior to listing them, and that they do not see the pattern represented by their choices. An example of directions using seating arrangement as the means of eliciting choice follows:

You are now seated according to an alphabetical arrangement. Some of you have told me that you would like to change your seats. I want to give all of you an equal chance to sit near your friends. To help me do this, please write the names of those whom you would prefer sitting next to. Give your first, second, third, fourth, and fifth choices. If there are some you would not like to sit near, list those names. I will use your choices to rearrange your seats. No one else will see your list of names.

To facilitate this operation, especially to eliminate asking of questions which in turn would give increasing opportunity for student discussion and comparison of choices, the teacher may give each student a slip of paper or 3×5 card arranged thus:

My name

Students I would like to sit next to:

First choice

Second choice

Third choice

Fourth choice

Fifth choice

Students I would not like to sit next to:

It is imperative that directions be specific and easily understood, that they be presented informally arising out of a classroom situation, that they include the reason for the administration, and that the data obtained lead to action on the part of the students and teacher.

Tabulating and Diagraming. After the students have listed their choices, the teacher records them as illustrated in Figure 1. In the left margin are the names of the choosers. These same names in the same order are written across the top of the page as chosen. Choices made by each individual are placed in the appropriate column under "Chosen." At the bottom of the page is space for entering total first, second, third, fourth, fifth, and negative choices. The total number of such choices received by each individual is obtained by adding downward.

A score for each individual may be gained now by multiplying the total number of first choices received by five, total number of second choices received by four, and so on down to one for fifth choice; subtract three for each negative choice. Thus, an individual receiving three

| CHOSEN → CHOOSER ↓ | Alben | Anice | Briggs | Bush | Fabian | Fried | Gida | Gillett | Harms | Kay | Lee | Lester | Patmore | Prince | Ray | Ritter | Rusk | Smith | Stark | Towns |
|-----------------------|-------|-------|--------|------|--------|-------|------|---------|-------|-----|-----|--------|---------|--------|-----|--------|------|-------|-------|-------|
| Alben | • | | | 2 | | 1 | | | | | 3 | | | | 5 | | | | 4 | |
| Anice | 5 | • | | | 2 | 4 | | | | | 1 | | | | | | 3 | | | |
| Briggs | | 4 | • | | | 1 | | | | | | | 3 | | | 5 | | | | 2 |
| Bush | 1 | | 5 | • | | | 2 | | | 4 | | | | | | | | | 3 | |
| Fabian | | 3 | | 2 | • | | | | | | 5 | | | | 4 | | | | 1 | |
| Fried | | | 3 | | | • | 1 | | | 2 | | | | | | | 4 | | | 5 |
| Gida | 1 | 2 | | 3 | | 4 | • | | | 5 | | | | | | | | | | |
| Gillett | | | | - | | | 1 | • | - | | | | | | 2 | | | | | |
| Harms | | | 1 | | | | 3 | - | • | | | | | | | | | | 2 | |
| Kay | | 5 | | 4 | | | | | | • | | | 3 | | | | 2 | | | 1 |
| Lee | 4 | | | | 2 | | | | | | • | | | | 1 | | | | | 3 |
| Lester | | 1 | | | | | | | - | | | • | | | | | | | | |
| Patmore | | | 2 | | | | | | | 1 | | | • | | | | | | | |
| Prince | | | | | | | | | | | | | | • | | | | | | |
| Ray | 4 | | | | 2 | | 3 | | | | 1 | | | | • | | | 5 | | |
| Ritter | | | 1 | | | | | | 2 | | | | | | | • | | | | |
| Rusk | | 1 | | | | 3 | | | | | | | | | | | • | | | 2 |
| Smith | | | | | 4 | | 2 | | - | | | 3 | | | 1 | 5 | | • | | |
| Stark | 2 | | | | 5 | | 1 | | | | 3 | | | | | | | | • | 4 |
| Towns | | 4 | | | | | 3 | | | 1 | | | | 5 | | 2 | | | | • |
| 1st choice | 2 | 2 | 2 | | | 1 | 4 | | | 2 | 1 | 1 | | | 2 | | | | 1 | 1 |
| 2nd choice | 1 | 1 | 1 | 2 | 3 | | 2 | | 1 | 1 | | | | | 1 | 1 | 1 | | 1 | 2 |
| 3rd choice | | 1 | 1 | 1 | | 1 | 3 | | | | 2 | 1 | 2 | | | | 1 | | 1 | 1 |
| 4th choice | 2 | 2 | | 1 | 1 | 1 | 1 | | | 1 | | | | | 1 | | 1 | | 1 | 1 |
| 5th choice | 1 | 1 | 1 | | 1 | | | | | 1 | 1 | | | 1 | 1 | 2 | | 1 | | 1 |
| Negative | | | | 1 | | | | 1 | 3 | | | | | | | | | | | |
| Score | 19 | 22 | 18 | 10 | 15 | 10 | 39 | -3 | -5 | 17 | 12 | 8 | 6 | 1 | 17 | 6 | 9 | 1 | 14 | 19 |

Figure 1. Form for Tabulating Sociometric Data. List the names in the same order horizontally and vertically. Insert the choices made in the proper square under "Chosen."

first choices, two seconds, four thirds, and two negatives has a score of $29 : 15 + 8 + 12 - 6$.

To obtain a picture of association whereby seating arrangement based on the choices becomes more apparent, the pattern of choices is diagrammed as in Figure 2. In making such a diagram, start with the individual who was chosen most frequently. Using a triangle to represent boys and a circle to represent girls, place the most frequently

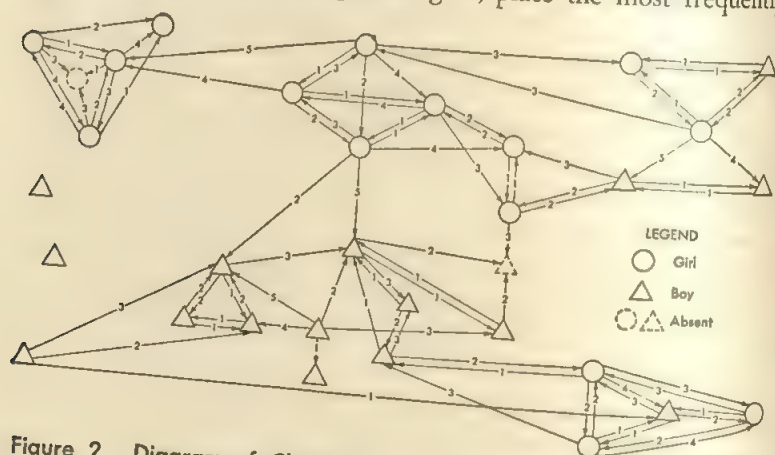


Figure 2. Diagram of Choices. Arrows indicate direction of choice; number on line indicates intensity of choice.

chosen individual near the center of the page and draw lines to all others he has chosen and from all others who chose him. Use arrows to indicate the direction of choice; place the order of the choice, as first, second, or third, immediately above the line and near the chooser. Use a different color to indicate rejections. Plot the remainder of the class, always grouping the most frequently chosen toward the center of the page and placing mutual choices nearby. Those who have received no choices fall around the edge of the total group. Those who have neither received nor given choices should be placed on the outside away from the group where they can be located readily.

Practice is necessary to make sociograms. The first one may take two or more hours and will require a considerable amount of experimentation in locating the individuals most efficiently to indicate the interaction in the group.

Interpreting Sociometric Data. The score gives an indication of the intensity and amount of interaction. Those students with highest scores are the most accepted and desired members of the class, and those with lowest scores are the least desired. If negative choices were elicited and three points subtracted for each negative choice received, lowest score may indicate intensity of rejection, but not necessarily, for one individual may receive six first choices and two negative choices for a total score of 24, while another may receive seven third choices for a total score of 21. Obviously, a total negative score shows rejection.

The sociogram shows the direction and amount of interaction among the group pictorially. It is useful for finding those individuals who are the centers of groups, those who are not desired, those who want to be accepted and by whom; and the pattern of mutual choices shows the cliques and crowds if such exist. By using triangles for boys and circles for girls, sex as the basis of choice is readily discoverable. Other than this, the sociogram does not reveal why the choices were made as they were. Other information is necessary to find why particular patterns were established.

Some of the things which can be done to help interpret the sociogram follow: (1) Get IQ or achievement scores and place them in the triangles and circles to see if they were determining factors of choice; (2) get racial or national background and home location to see if these contributed; (3) get physical development or chronological age to determine if they contributed; (4) make informal observations of the group to determine why the pattern came out as it did.

ANECDOTAL RECORDS

Behavior of adolescents is variable according to the situation. In one classroom a boy or girl will show a great deal of interest, will get to work immediately, and will pursue worth-while tasks with zeal and enthusiasm. In another classroom the same boy or girl will show no interest and accomplish little. Also, the individual may exhibit completely different behavior in the home, on the playground, at a social activity, and in the classroom. Objective records of behavior in a number of different situations give important clues for understanding the

adolescent as a whole person and for identifying the unique characteristics which make him an individual.

In making objective anecdotes of behavior, these steps may be followed: (1) Briefly, but in enough detail to reveal important aspects, describe the situation in which the behavior occurs; (2) record the behavior exactly as it occurs including specific details; (3) after completing the recording, check what has been written to make sure that it contains no subjective adjectives such as good or bad, bright or dull, lazy or industrious; (4) interpret the behavior observed if enough information has been gathered to reveal a pattern. Keep the interpretation separate from the record of observation by clearly indicating that it is your interpretation.

Anecdotal records of an adolescent's behavior may be made by an individual or by a group of teachers. An adolescent, during one week, may attend basketball practice, a student council meeting, and a junior class dance. During the day he may attend classes in United States history, chemistry, English, machine shop, and mathematics. Thus, within the school, many situations are present for investigation. One teacher, if time permitted, could follow this individual and make objective records of his more significant behaviors in these various activities. Through analysis of his conduct in school-directed situations, insight into his school behavior could be obtained. When each of a group of teachers contributes an objective record of the behavior of an adolescent or several adolescents under his direct supervision, this information can be brought together and analyzed by all the teachers in a case conference.

The author has found that the college student, through studying a person in different classroom situations, learns a great deal about adolescent behavior in general and also gains insight into methods used by various teachers to meet the needs of adolescents. The procedure in which several teachers contribute anecdotal records of the same student's behavior is especially valuable in gaining a better understanding of a student who is not understood well by one or more of the teachers or who is not progressing well in one or more of his classes. Usually, when one teacher can get four or five others interested in studying the adolescent for the purpose of helping him make a better

school adjustment, the adolescent responds to such interest with improved performance and conduct.

CUMULATIVE RECORDS

Information contained in school records varies widely in usefulness. Most records include the following kinds of information: (1) identifying data, including age, sex, race, home location, parent's occupation, siblings and their ages; (2) weight and height, health status, and record of absence for health reasons; (3) courses taken and grades made; (4) psychological and achievement test data; (5) attendance; (6) special interest and aptitudes, hobbies, and work experience; and (7) teacher evaluations of the student. These data are useful in understanding the adolescent's total development. The record of his past, along with objective anecdotes and sociometric analysis of his present behavior, provides the information necessary to understand him and to work out a program of action designed to help him achieve his potential.

THE OBSERVATIONAL CASE STUDY

When the data thus far outlined have been obtained, an efficient way to summarize and make them useful is by incorporating them into an observational case study. The making of an observational case study provides a concrete method for studying an adolescent and thereby developing the skill necessary to study other adolescents. Further, most individuals who have made a case study of one adolescent learn to withhold judgment of other adolescents until they have gathered facts on which to base their judgments. The careful making of one case study is an invaluable learning experience in gaining insight of cause and effect in adolescent behavior.

A form which has been found to provide a practical framework for developing an observational case study follows:

1. Record objective data which are useful for understanding this adolescent under the following headings:
 - a. Identifying data.
 - b. Physical development and health status. Growth curve and medical examinations are important.

- c. Relations in the home with parents and siblings.
- d. Relations in the neighborhood, especially with age mates.
- e. School record: attendance, grades, and test results.
- f. Interests, hobbies, and work experiences.
2. Record significant objective anecdotes.
3. Record sociometric data.
4. Interpret the data in terms of the developmental needs of adolescents and the principles of behavior outlined in this chapter.
5. If the data so warrant, suggest a plan of action to assist this youth.
6. Put it into effect.
7. Evaluate the effectiveness of the plan.

As suggested in the discussion of anecdotal records, all teachers working with the adolescent being studied can profit from contributing anecdotal records. In steps 4, 5, 6, and 7 a group of interested teachers can accomplish more than can one individual teacher. If they share in gathering and interpreting the data and in developing a plan of action, they will work toward carrying it out and assuring its effectiveness.

Besides providing a framework for studying an individual, the making of a few such observational case studies yearly is an excellent means of keeping abreast of the problems of youth maturing in the school and community. Analyzing such studies systematically is an excellent means of attaining a higher degree of professionalism in teaching in that better understanding of youth is assured.

SUMMARY

Five generalized principles contribute to understanding human behavior: Human beings are goal seeking and direct activity to satisfy their biological and social needs; maturation affects behavior through changing both the needs and the means for satisfying them; adjustment problems arise at any stage in development when needs are not satisfied; individuals attempt to meet their problems intelligently; and all behavior is caused and therefore understandable.

Seven of the important developmental tasks common to many adolescents in our society are: (1) understanding and accepting own physique, (2) developing satisfactory relationships with age mates,

(3) establishing new relationships with adults, (4) achieving emotional maturity, (5) achieving economic independence, (6) achieving intellectual maturity, and (7) building a philosophy of life.

Securing data from the cumulative record and administering sociometric tests are useful procedures for securing basic information about adolescents. These techniques consume little time and should be used by every teacher. Making and recording anecdotal records of an adolescent's conduct in a number of situations over a period of time is more time consuming but gives further insight into his behavior. Combining information obtained from the cumulative record, sociometric tests, anecdotal records, and other sources to make an observational case study of an adolescent is an excellent procedure for gaining understanding of the methods for studying adolescents, learning the importance of withholding judgments until facts are obtained, and devising procedures which help adolescents make better adjustments. Teachers find that making such studies of a few adolescents each year helps them to keep in touch with the problems of youth and to keep alive their interest in youth.

QUESTIONS AND ACTIVITIES

1. Why should secondary teachers attempt to understand human behavior?
2. How is need satisfaction related to the activities in which an adolescent engages?
3. What part of a teacher's life activities is spent in securing food, housing, clothing, education, and recreation for himself and his dependents? How important is it for the teacher to achieve most of his important life values through teaching?
4. How is adjustment related to need satisfaction?
5. What are the main blocks adolescents meet in satisfying their needs?
6. How do the needs of adolescents differ from the needs of children?
7. In what way does a mature teacher differ from the adolescents being taught?
8. List student behaviors in the classroom which appear unexplainable. Why do they appear so?

9. What is a developmental task?
10. Arrange the developmental tasks in the order in which the teacher should be most concerned with helping the adolescents master them. Briefly indicate why you arranged them so.
11. List the developmental tasks which caused you most concern during high school years. With which did your high school teachers give you most help? With which did your teachers give you little or no help?
12. Write the exact directions to be used in administering sociometric tests to get students grouped (a) for physical activities, (b) for in-class work activities, and (c) for out-of-class work activities connected with class work. Administer the tests and explain the pattern of choices obtained.
13. In your class, elect a president and vice-president by sociometric methods with the highest-scoring individual becoming president and the second highest vice-president. (Each student lists his first five choices for president without nominations; each student thus is a candidate for the offices.) What are the strengths and weaknesses of this method for electing officers?
14. Keep anecdotal records of two to five students in a class for one week. What major values accrue? What are the major difficulties encountered?
15. According to the suggested plan, make an observational case study of an adolescent or of an individual about whom you can secure needed information. After completing the study, list (a) the chief values derived from the work and (b) the chief difficulties encountered.

REFERENCES

- Barker, Roger G., Kounin, Jacob S., and Wright, Herbert F., *Child Behavior and Development*, New York, McGraw-Hill Book Company, 1943, chaps. 9, 27, 28, 30, 31, 33, 34.
- Bell, Howard M., *Youth Tell Their Story*, Washington, American Council on Education, 1938.
- Carmichael, Leonard (ed.), *Manual of Child Psychology*, New York, John Wiley and Sons, 1946, chap. 12.
- Caswell, Hollis L. (ed.), *The American High School*, New York, Harper & Brothers, 1946, chap. 5.

- Cole, Luella W., *Psychology of Adolescence*, New York, Rinehart and Company, 3rd ed., 1948.
- Commission on Teacher Education, *Helping Teachers Understand Children*, Washington, American Council on Education, 1945, chaps. 2, 3, 4.
- Davis, Allison, and Havighurst, Robert, *Father of the Man*, Boston, Houghton Mifflin Company, 1947.
- Faculty of the University School, Ohio State University, *How Children Develop*, Columbus, University of Ohio Press, rev. ed., 1949.
- Havighurst, Robert, and Taba, Hilda, *Adolescent Character and Personality*, New York, John Wiley and Sons, 1949.
- Hollingshead, August, *Elmtown's Youth; the Impact of Social Classes on Adolescents*, New York, John Wiley and Sons, 1949.
- Horrocks, John E., *The Psychology of Adolescence*, Boston, Houghton Mifflin Company, 1951.
- Hurlock, Elizabeth B., *Adolescent Development*, New York, McGraw-Hill Book Company, 1949.
- Jennings, Helen H., et al., *Sociometry in Group Relations*, Washington, American Council on Education, 1948.
- Jones, Harold E., *Development in Adolescence*, New York, Appleton-Century-Crofts, Inc., 1943.
- Merry, Frieda K., and Merry, Ralph V., *The First Two Decades of Life*, New York, Harper & Brothers, rev. ed., 1950, chap. 1.
- National Society for the Study of Education, *Adolescence, Forty-Third Yearbook*, Chicago, University of Chicago Press, Part I, 1944.
- National Society for the Study of Education, *The Education of Exceptional Children, Forty-Ninth Yearbook*, Chicago, University of Chicago Press, Part II, 1950.
- National Society for the Study of Education, *Juvenile Delinquency and the Schools, Forty-Seventh Yearbook*, Chicago, University of Chicago Press, Part I, 1948.
- Newman, Frances B., *The Adolescent in Social Groups; Studies in the Observation of Personality*, Stanford, Stanford University Press, 1946.
- Terman, Lewis M., and Oden, Melita, *The Gifted Child Grows Up*, Stanford, Stanford University Press, 1947.

CHAPTER 3

The Nature of Learning

As the individual gains mastery over himself and his environment, his patterns of behavior become increasingly complex. Part of this change results from maturing, part from learning. The developmental sequence of human growth is subject to fairly accurate observation and measurement; the learning process is not because we have not been able to describe or measure precisely the neural action involved in learning. We do not know what happens within the central nervous system as the individual learns. We can infer what occurs through measuring products of learning—fewer errors in solving problems, less time to swim fifty yards, less energy to type a letter. In learning, as in maturation, a developmental sequence characterized by continuity rather than abruptness and by great variation among individuals in rate and in final achievement is apparent.

In this chapter the learning process and learning products are first treated to present a broad overview of learning; factors affecting learning are discussed; then follows an outline of methods for studying important aspects of classroom learning.

WHAT IS LEARNING?

One may develop a better understanding of learning through examining how learning occurs and by differentiating various types of learning products. If we can discover how learning occurs in general, we may be able to implement students' learning more effectively through appropriate instructional method. The result may be the same

if we can differentiate various types of learning products and discover methodology which is particularly adapted to each.

THE LEARNING PROCESS

Broadly conceived, learning is the process by which human beings adjust to their environment. It is a process of differentiation, integration, and generalization, a process of organizing and reorganizing experiences into more meaningful patterns of understanding and action. While learning occurs from interaction with others, each individual must learn for himself. There is no magical or supernatural way for transferring what one has learned to another. No understanding or skill is transmitted from teacher to student except as the student incorporates understanding or skill into his unique pattern of learned activity.

Briefly, we may illustrate the learning process this way: An individual is motivated to satisfy a biological or social need. Tension arises. This causes him to direct his attention and activity toward a goal which when achieved will satisfy the motive. The goal is not immediately attainable. Different methods for reaching it appear plausible and may be tried. The learner exercises his intelligence which enables him to utilize past experiences in relation to the present situation to organize appropriate methods for reaching the goal. Upon reaching it, he drops inappropriate methods, and the appropriate method becomes the individual's learned response.

What essential features concerning learning may be drawn from the above illustration? First, the individual is motivated, and a goal or incentive to action becomes associated with the motive. Second, he consciously attends to the situation. Third, he engages in trial-and-error responses or at least refinement of partially developed responses while attempting to reach a goal. Fourth, he generalizes from previous experiences and brings such learning to bear upon the task of discovering a new or refined method for reaching his goal. Fifth, inappropriate methods are discarded. Sixth, the new or better-organized method is integrated into his learned behavior pattern. Throughout, mental activity is involved as the individual consciously attempts to satisfy a motive. If the goal had been immediately attainable through use of already learned responses, the individual would not have learned.

Examine the above characteristics of the learning process in relation to your learning to drive a car, to make introductions properly, to present a report to the class, or to dress a bulletin board. Also, as you read about learning products, try to establish a relationship between each product and the essential features of the learning process just described.

LEARNING PRODUCTS

Anderson and Gates group learning products into six major categories: (1) motor activities; (2) concepts, meanings and generalizations; (3) motives, interests, and attitudes; (4) social and emotional controls; (5) aesthetic types of behavior; and (6) techniques of problem solving.¹ You may note that the products carry designations similar to those used in describing the process. In the next pages it will be well to differentiate between process and product, e.g., generalizing and generalization.

Motor Activities. Motor skills require coördination of the neuromuscular system to accomplish a physical act. In most learning activity a degree of motor activity is involved. Motor activities such as controlling the eyes in reading; controlling arm, hand, and fingers in writing; and changing postural attitude to accomplish any activity are not given major attention in secondary schools because students have already mastered these skills and perform them at a relatively automatic level. Motor skills which can be performed with very little or no conscious effort are called sensory-motor skills.

Instruction in the secondary school is frequently concerned with helping students develop higher levels of motor skills such as operating the typewriter and other machines in commercial classes; using tools and materials in home arts, crafts, and industrial arts classes; playing instruments in music classes; and using the body at a higher level of coördination and precision in physical education classes. Most of these

¹ For clarification of the learning process and how most learning products may be grouped into these categories, see G. Lester Anderson and Arthur I. Gates, "The General Nature of Learning," in National Society for the Study of Education, *Learning and Instruction, Forty-Ninth Yearbook*, Chicago, University of Chicago Press, 1950, Part I, pp. 12-35.

are not purely motor skills but all require some motor activity. Besides the motor activity involved in operating the machine, the skilled typist must be able to read printed materials, listen to records, etc., and produce copy accurately at a high speed. Skills which require some perceptual pattern to be reproduced in accurate form are called perceptual-motor skills. Perceptual-motor skills like playing a piano or typing cannot be built at a high level of skill until the motor part becomes quite automatic.

Concepts and Generalizations. The terms "concept" and "generalization" refer to learning products which are usually verbal and which require understanding of words, numbers, and other symbols. Some generalizations which guide behavior, especially that related to motor activity, need not be verbalized. Generally, however, concepts and generalizations are developed through learning the meaning of words and their relationships.

The building of concepts and generalizations occupies a prominent role in secondary instruction. An arithmetic reasoning problem, to be solved correctly, requires the individual to understand words and numbers, to perceive the relationships among them, and to make various computations—adding, subtracting, multiplying, and dividing—computations which are usable only as meaning has been attached to them. Further, if learning to solve the problems in class is to be useful in solving problems outside class, the learner must be able to use the facts and skills and to apply the underlying principles or generalizations in the new problem situations.

Considerable learning in social studies, science, and literature involves the building of concepts and generalizations—building meaning of words, facts, and relationships and using them effectively in many situations. As we shall see in a later discussion in this chapter, building concepts occupies a prominent role in an individual's learning throughout life. Conceptual learning is involved in the infant's associating and saying "Mama" to mean his mother. The teacher, the scientist, the industrialist, and the career diplomat, regardless of age, must continuously build new concepts in order to understand and to interpret facts, principles, and relationships. Probably, the more meaning these persons draw from verbalized communication and the more effective they

are in communicating their thoughts to others, the more effectively will they deal with new situations which they constantly meet.

Motives, Interests, and Attitudes. Some disagreement exists concerning definitions of motive, interest, and attitude. If we define a motive as any condition within the learner which initiates and directs activity, then attitudes and interests may be considered motives. It is in this sense that these learning products are grouped and discussed. We recognize, however, that motives may or may not be learned. Wanting to go to college to prepare for teaching is a motive which is learned. Biological needs—for warmth, food, rest, and activity—are not learned. Interests and attitudes are always learned. The child at birth has no interests or attitudes.

An attitude is a learned predisposition to react in a characteristic way, favorable or unfavorable, toward a person, object, or idea, and is usually emotionally toned. Thus, we have attitudes toward a crippled child, toward apple pie for dessert, and toward capital punishment. These attitudes affect our behavior in specific instances. In teaching we are greatly concerned with attitudes in all instructional activities because students should develop those attitudes toward the learning situation, toward classmates, and toward the teacher which lead them to react to the total situation favorably. This reaction, in turn, enhances the whole learning process related to any classroom work.

When a person is interested, he consciously and closely attends to the situation or activity. If highly interested, he becomes preoccupied with it to the exclusion of other competing stimuli. Though many environmental and maturational factors operate which cause individuals to vary in kind and intensity of interests, it is extremely important to organize the learning situation in such manner that students focus attention upon work activities and become preoccupied with them—in other words, to build student interest in the work.

In general, psychologists and educators have been quite successful in identifying or typing motives, interests, and attitudes through careful observation of the behavioral patterns of individuals. One can tell when a student is motivated, when he is highly interested, and what his attitudes are in a given situation. Through intensive study one may

discover a developmental sequence which explains an individual's pattern of motives, interests, and attitudes. As yet, much research needs to be carried out to discover how socially desirable motives, interests, and attitudes may be taught to children and youth effectively and how antisocial motives and attitudes may be eliminated where they already exist.

Social and Emotional Controls. Learning social and emotional control involves understanding oneself in relation to others, building social skills to maintain satisfying relations with others, understanding and controlling emotional expression, and developing attitudes toward self and others which lead to personal adjustment and to satisfactory adjustment to other human beings.

In many secondary classrooms little attention is given to instruction in this field. There is probably no body of subject matter which could be organized as a high school subject in this area. Assuredly, an attempt to teach a short unit on social or emotional control as a required activity in a given grade in the junior or senior high school could not be expected to be highly successful. Instead, methods of instruction used throughout the secondary school years should be directed toward developing these controls, which, like concepts, start to form early in life and continue into adulthood.

Aesthetic Types of Behavior. Aesthetic behavior usually refers to appreciation of an artistically organized, expressive form such as music, the visual arts, the language arts, and dancing. Artistically executed drama, for example, arouses in the observer a distinct feeling tone and also, because it has an underlying theme, elicits an association between the theme and the observer's own experiences. Listening to a musical composition arouses the feeling, but often the listener is not conscious of a theme. How an individual responds to a dramatic performance of a philharmonic orchestra, which according to our cultural standards should evoke aesthetic responses, is dependent upon many factors; chief among them are visual and auditory discrimination, imagination, depth of emotional responsiveness, breadth of experiences with life situations, and understanding or skill in the activity itself.

Most high schools attempt to help students appreciate experiences

of the kinds outlined. With aesthetic behavior as with other learning products children early in life learn to respond to expressive forms and can be helped to express themselves creatively and to experience beauty in their surroundings. Probably, if each classroom were arranged and decorated artistically, if each teacher helped students recognize aesthetic features in some aspect of their study and encouraged them to respond aesthetically to the actions and expressions of others, the secondary school would become more effective than it is at present in helping students to appreciate and to express themselves creatively.

Techniques of Problem Solving. A problem arises when an individual or group is confronted with a situation which must be met and for which no adequate solution has been developed. Most of us have met or will meet problems like these:

1. How can I get a position which I desire?
2. Which teaching position shall I accept?
3. Which professional organizations shall I join?
4. For which presidential candidate shall I vote?
5. Which car shall I buy?
6. How can I evaluate students' work fairly?
7. How can I keep mentally and physically fit?

These problems are not solved readily by many adults. A wide range of differences exists in the effectiveness with which they are solved.

High school students find equally difficult problems in deciding which program or track to pursue, whether to engage in organized athletics, whether or how to ask for a date, how to run the student council, how to make a good impression on the teacher, and many others connected with work in all classes.

Techniques or skills in problem solving are built as the individual learns how to meet new situations and may be learned quite incidentally through everyday experiences. They may be learned more efficiently with guidance. The teacher who would help students build techniques of problem solving must organize learning activities so that opportunity is present for students (1) to identify problems, (2) to clarify problems through gathering and analyzing information, (3) to propose hypotheses or possible solutions, (4) to discover the better or best solution through careful analysis of the information, and (5)

to test the solution by applying it. In almost every classroom problems such as the following may be raised for student solution:

1. What are the most important values to be gained from taking this class?

2. What is the best method for carrying out this work activity?

3. How can we keep the classroom tidy and orderly each day?

4. How shall we conduct ourselves in this classroom?

5. How can we use supplementary materials in the classroom to best advantage?

Most teachers agree that classroom instruction is improved when students have discovered acceptable solutions to each of these problems. If time were taken at the beginning of a semester to have the class clarify any one of the problems and throughout the semester attempt to solve it, each student would be helped in building techniques of problem solving.

We have now examined six learning products quite separately from one another. It should be apparent that the separation is to establish a framework within which to study learning and that students, during any given instructional period, may develop several of them. It is in this frame of reference that factors affecting learning are now examined.

FACTORS AFFECTING LEARNING

Many factors affect how learning proceeds; to some extent learning is unique to each individual and to what is being learned. However, we recognize that groups of adolescents may encounter common tasks in learning. Some of the more important generalizations which have been identified through analysis of human learning and which are useful in organizing teaching-learning situations throughout the secondary school are now treated as follows: (1) Differences exist among learners in kinds of abilities. (2) Differences exist among learners in readiness. (3) Motivation is an essential component of learning and readiness. (4) Learning follows a developmental sequence. (5) Practice is necessary for developing skills. (6) Insight is necessary for efficient problem solving. (7) Meaningful learning transfers to new situations.

DIFFERENCES EXIST AMONG LEARNERS IN KINDS OF ABILITIES

By the time boys and girls reach junior high school, wide differences are found among them in different kinds of learning aptitudes and achievements. Some are far superior to others in skills involving neuro-muscular coördination such as swimming, playing ball, and using machines or tools. Differences are also found in verbal skills; some read well and have wide vocabularies whereas others are years behind. Among seventh-graders, a range from fourth- to tenth-grade placement in reading and vocabulary usage is found. That is, one reads at average achievement of a fourth-grader while another reads at average achievement of a tenth-grader. In the tenth grade the range is even wider. Differences exist, too, in arithmetic and spelling achievement and in social skills. Among seventh-graders, some boys lead others three or four years their senior in informal play and social activities; others follow and take directions from fifth-graders. In creative achievement such as music and art the differences are perhaps greatest, and range from nil to a high degree of skill. Undoubtedly, this variation is due to highly unequal opportunities to develop these skills in elementary school programs and the homes from which the children come. Thus, when we analyze learning abilities according to the six broad categories previously listed, we find wide differences existing among individuals at all grade levels. These differences must be accounted for through efficient instructional methods and use of materials if all students are to learn most efficiently.

DIFFERENCES EXIST AMONG LEARNERS IN READINESS

Readiness for a given learning activity refers to the individual's ability to profit from engaging in the activity at a specific time in his development. To determine whether a learner is ready for a given activity we must examine his maturational level, his motivational status, and his experiential background.

Maturational readiness includes two major aspects: physical and mental maturity. The importance of considering mental maturity is emphasized in the many investigations which show that children with a mental age of seven profit far more from formal instruction in read-

ing than do those with a mental age of five. Forcing a child to drill prior to the time he is mentally mature enough to master reading may lead to emotional blocks so that he never develops his potential. Undoubtedly, many junior high school students whose mental maturity is sufficient to profit from remedial reading or arithmetic do not because of attitudes against such learning.

There is no doubt that mental growth proceeds at different rates among learners. Whether such different rates are primarily caused by hereditary or environmental factors is not finally established; the fact remains that among an unselected group of ninth-graders mental ages ranging from twelve through eighteen are frequently found. Through consecutive grades, differences in mental age increase rather than decrease. Very few studies have been made of minimum mental age necessary to participate successfully in different kinds of high school learning such as solution of geometric problems, developing speaking skill in a foreign language, and playing in a high school orchestra. We cannot at this time cite minimum mental age necessary to do successful work in high school subjects as they are usually organized. Two things remain to be done: First, we must anticipate wide differences and gear learning activities to a broad range of mental maturity levels; and second, we must find out what levels of mental maturity are necessary for youth to engage profitably in many learning activities currently included in the high school curriculum.

Physical maturity, while not so crucial in verbal instruction, is a highly important factor with growing adolescents in all kinds of physical and social activities. No one recommends requiring all seventh-graders to become proficient in social dancing because many boys are too immature, physically and emotionally, to be interested in such learning. A course in human reproduction, required of all students in the eight grade, would meet with some failure because of different maturity levels. The slow developing girl does not become a cheerleader or a drum majorette in the seventh grade. Attempts to educate her for these skills would not yield encouraging results. Overstimulation of physically immature adolescents probably does lasting damage; certainly it brings discomfort and maladjustment at the time, as illustrated in a physical education class.

A student teacher lined up a group of thirty-two boys according to height for physical activities. In this group there were Chinese, Negroes, and whites. The boys "counted off" from one through thirty-two, and then, according to sequential number, formed four competing relay teams. The first eight, the tallest, were all white. The next eight were white except two Negroes and one Chinese. The next eight were four white, one Negro, and three Chinese. The last group, the shortest, were all Chinese, except one Negro and one white. The relays consisted of: (1) dribbling a basketball the length of the gymnasium and back; (2) dribbling the length of the floor, shooting until a basket was made, and returning; (3) running the length of the floor; (4) running halfway, tumbling over a mat, and returning; and (5) vaulting over a horse placed the same height for all teams. In four relays the first team won; in one relay the second team won. The third and fourth teams did not win; either of these always finished last, with the fourth team most frequently losing. It is not difficult to understand how a feeling of discrimination on the basis of both size and race might develop in this situation. Physical education of all kinds must consider physical maturation, both from the standpoint of health of the individual and from the attitudinal aspect.

Previous experiences are also important in selecting learning activities for high school students. If high school boys and girls are going to appreciate drama through the silent reading of *Macbeth*, they must have the necessary vocabulary and reading skill to get meaning from it. If boys and girls are going to learn to govern themselves in school through a student organization, they will do it better if they have had experience in governing themselves in the classroom.

In any kind of activity for a given group of adolescents the learning must start where the individuals are, not where the "average" ought to be. An examination of previous grades and achievement test scores yields helpful information concerning where adolescents are. Informal diagnostic tests, measuring, for example, vocabulary or arithmetic skill, can be constructed to determine where the learner is in a particular area of achievement. Some textbooks, written for a particular grade, pitch the vocabulary one grade above where the text is used. Many students find much of it too difficult to be understood; they are not ready for it.

MOTIVATION IS AN ESSENTIAL COMPONENT OF LEARNING AND READINESS

Everyone knows that individuals learn when they are interested and that they are most interested in activities which satisfy biological and social needs. Characteristically, there is a wide range of interests to be found among any group of adolescents. It is equally true that interests are highly modifiable throughout the early adolescent years; also adolescents have some common interests because they have common needs. The teacher who can discover the interests and needs of adolescents and build worth-while learning activities around them has gone far in mastering the problem of motivation in classroom learning.

Rewards and Punishment as Incentives for Learning. Frequently, teachers are enthusiastically concerned with a particular bit of subject matter and assume that all the students are. Often the practice is to start a learning activity with an assignment in a textbook or a lecture by the teacher. In either case, a number of students are probably not interested and do not profit from the activity. Then the teacher must "use motivation" to get work performed. Rewards and punishments fit into such an extrinsic motivational pattern.

Rewards serve as incentives for learning with some adolescents. If a class is told that, by getting a certain number of problems completed during the first four days of the week, they will be given a fifth period to discuss recent films seen, those who enjoy discussion and have seen films may work the problems. What will they do the following week? Work for the whole week without the free period? Probably not. Instead they may demand the last two days for discussion of films. When rewards are used as incentives for learning, the rewards must be increased progressively in order to serve as a continuous incentive.

Further, the student may work for the reward to the point that the reward itself becomes more important than the learning. A father tells his son that he will receive a new convertible when he graduates. Under such circumstances, it is entirely possible that the youth will work hard to graduate; he may even learn to cheat or whatever else is necessary to finish.

Usually rewards are given for a fixed standard of performance and are available only to those who achieve such standards. When the

rewards are available only to a few, those who never win get discouraged. Three serious objections to using rewards are thus apparent: (1) Rewards must be increased progressively for continuing motivation; (2) as an end product, the reward becomes more important than the learning; and (3) competing for rewards does not provide incentive for those who do not win them.

Punishment and threat of punishment may also serve as incentives for learning and as deterrents for undesirable behavior. Adolescents may memorize a certain number of lines of the Constitution to avoid staying after class. An adolescent may desist from carving initials in his desk to avoid being sent to the principal's office. One may refrain from cheating if given a zero on the test or an *F* in the course. We shall examine punishment situations like these to determine their effects in the classroom.

When threat of punishment is employed, the teacher must police the learning situation to make sure that the work is accomplished or the punishment is received. The teacher sets up a standard to be achieved, outlines a punishment if it is not met, and sees that no student avoids both. Doing these three things requires attention and effort, so the teacher has less time to help the learner master the work. The teacher must center most attention on seeing that all perform the task, for threat of punishment is meaningless unless carried out when the work is not performed.

In a punishment situation, the teacher presents the learner with two ways of acting, neither of which is desired; obviously, no threat of punishment would be necessary if the student wanted to accomplish the work. The teacher, because of different attitudes existing among the students toward the proposed punishment, cannot predict which will be chosen. Thus, the conduct of the learner becomes unpredictable. Which will an adolescent choose? Staying in for fifteen minutes during lunch hour or preparing and presenting a five-minute oral report on the spoils system under Andrew Jackson?

Boys and girls try to escape from unpleasant situations forced upon them and over which they have no control. When presented with two unpleasant situations, they learn methods of evasion and undesirable attitudes. Some drop classes; some learn deep dislike of the teacher,

the subject, the school, and the whole educative process. Others become truants; some, legally old enough to quit school, do so. Others sink into mental truancy through daydreaming and other escape mechanisms, accepting the punishments as part of the requirements for graduation.

While neither rewards nor punishments are desirable as incentives for learning, the use of rewards has four distinct advantages over the use of punishments: (1) Using rewards requires less policing than does using punishment, thus freeing the teacher for more time to assist in the learning process. (2) Using rewards leads to more predictable results, for a learner is likely to perform an unpleasant task in order to receive something desired. (3) Using rewards leads to fewer personality conflicts and maladjustments because the learner has freedom to choose between doing the task and receiving the reward; there is no need for trying to escape. (4) Receiving the reward may lead to a liking of the task through associating the pleasantness of the reward with the task.

Success and Failure. Widespread use of reward and punishment is not necessary to get work accomplished in the secondary classroom. Boys and girls behave decently without threats and cajoling; they work industriously on tasks which are interesting and satisfy their needs. They are greatly concerned about doing things successfully. Adolescents and the teacher must share in organizing learning activities so that the former become interested in classroom work through deciding what to do and how, when, and why to do it. The teacher should facilitate this process in every classroom.

When students are given opportunity to decide work procedures in connection with any classroom activity, that activity becomes important to the point that the learner wants to work and feels successful for reaching his goal. The motivation is part of the learning activity coming from within the learner and causing him to act. The teacher sets the stage by providing a variety of concrete and interesting projects to assist the learner to build interests and set goals in line with his abilities and interests related to the class work.

Establishing Goals. When the learner, with or without teacher assistance, sets his own goal to be achieved, the possibility for success and failure is present. Usually the learner tries to set goals which he

wants to achieve and which he works toward. Through this effort he consciously experiences a success feeling. When the teacher sets the goals to be achieved without giving the student any opportunity to share in their selection, there is possibility for succeeding or failing to reach the teacher's goal as measured by the teacher. In this case the learner is not so vitally concerned because he is passively, not actively, engaged. The goal is not his goal. When the teacher sets the same goal for a group of individuals who have different aptitudes and achievements, there is little opportunity for many of them to experience success or failure because for some the task is too difficult and for others too easy.

A goal is too difficult when it is entirely outside of the possibility of being achieved and constitutes no challenge for the learner. Thus, if a beginning class in Spanish were given an assignment of two hundred words to memorize, none would experience failure because the task is too difficult. Twenty new words may be far too much for some individuals.

A goal is too easy when it can be achieved with such little effort that the learner does not feel he has accomplished anything worthwhile. Giving a sophomore class a list of twenty fourth-grade words to spell would offer no possibility for a feeling of success because it is much too easy.

When the learner has a share in setting goals, he has a tendency to make them neither too easy nor too difficult. If he has set his goal too high originally, he lowers it; conversely, when he has set it too low, he raises it. Although wide variation is found among learners in ability to set realistic goals, generally they set their goals more realistically after some preliminary practice than can a teacher. Learners and teacher together can work out challenging goals offering possibility for success for each learner. Feelings of success are important. The best background one can have established to meet failure is a backlog of success experiences.

Success and failure in relation to achieving goals must be considered from the learner's point of view and abilities. Success from the learner's point of view shows the following possibilities as analyzed by Hilgard:

1. To reach a goal constitutes success. This is the usual interpretation of success. It is obviously satisfying to try for something and achieve it.

2. To get within the region of the goal may be a success experience. Some goals are less well defined than others. A student may hope for an A grade, but be satisfied with a B; a person may wish an office, but take satisfaction in the fact that his fellow-members nominated him. . . .

3. To make noticeable progress toward a goal may provide a success experience, even though the goal is remote. To pass freshman physics is not to be admitted to medical school, but it is a step along the way.

4. To select a socially approved goal may in itself be a success experience. To be the kind of student who carries books home over the Christmas holidays is a mark of serious intent and is bolstering to the ego, even though the books remain unopened. To own an encyclopedia is to be the kind of person you would like to be, whether or not the encyclopedia is consulted.²

Teacher-student coöperation in setting goals and in setting standards to be achieved appears to be the answer to eliminating rewards and punishments as incentives for classroom learning. Artificial incentives are not necessary when students want to work to achieve their goals. To be successful is a most powerful impetus for engaging in productive activity.

Knowledge of Progress. Closely related to the feeling of success is knowledge of progress. To recognize that one is coming nearer to a goal tends to keep effort centered on activities in that direction. Conversely, the feeling that no progress is being made destroys initiative for further effort. If no measures of progress are made at intervals, the learner is not likely to know where he is and feels neither success nor failure for having completed particular activities.

Knowledge of progress means more than teacher examinations once or twice per grading period. It means that the learner sets up procedures whereby he measures where he is, discovers his errors, eliminates them, and achieves higher levels of performance. Teacher examinations can greatly assist in this process when the objective of the examination is for this purpose rather than the grading of all students with one measuring stick.

² Ernest R. Hilgard, *Theories of Learning*, New York, Appleton-Century-Crofts, Inc., 1948, pp. 221-222.

Useful self-measuring devices can be employed in classrooms with excellent results in building continuous motivation. In a foreign language class, each student's keeping a chart of words learned per day or week will provide a cumulative index of his progress. In a mathematics class, charting number of problems solved or percent correct will also give a graphic representation of progress. Keeping a record of number of words per minute on weekly speed tests in typing or shorthand provides incentive for increasing the speed.

This kind of self-measurement has distinct advantage over teacher examination for grading purposes because it provides each student with opportunity to experience success. The student who makes a gain of only three words per minute in typing during the month and who might thus rate lowest in the class can still see that he is going ahead. He is more likely to continue effort, knowing this, than if he did not know it and received a *D* or an *F* for the month's work.

LEARNING FOLLOWS A DEVELOPMENTAL SEQUENCE

Through studies of individuals beginning with birth and extending through the years, sufficient evidence has been gathered to discover the developmental sequence in learning vocabulary and related skills such as reading and writing—conceptual learning for the most part. It is entirely possible that sequences for learning motor activities, attitudes, and other learning products may be identified more definitely in the future. Therefore, considerable attention is given to this characteristic of learning.

Early Stages in Learning Vocabulary. The infant's first sounds are undifferentiated noises followed by vowel sounds. When vowel and consonant sounds are combined, first words are spoken. Always these first words are objects in the immediate environment with which the child has sensory experiences. Single words are used to express thoughts. "Mama" means "I want Mama." Two- and three-word sentences begin to appear and proceed simultaneously with the acquisition of more vocabulary. The meaning which these words have to the child is based upon his sensory experiences with them. As the child sees, hears, and touches a dog, or many dogs, his concept of the word "dog" widens to the extent of his experiences.

As vocabulary develops, length of spoken sentences increases. As meaning is attached to objects in the environment and recognition is accompanied with pictures, the child associates names with pictures. The next step is to recognize the word or words without the picture or the object—the beginning phase of reading. Thus, the learning has moved from sensory experiences with concrete objects and situations to naming, to associating name with picture, to associating printed word with picture, and finally, to getting meaning from groups of words in sentences and paragraphs. Concepts in the form of printed words or symbols are now ready to be used as tools in further learning.

Broadening Patterns of Conceptual Learning. Once the child can read, he is able to use the printed page to gain understandings outside his immediate environment through perceiving new relationships presented. Through reading, the learner practices those words already known and gains broader understanding of them. By perceiving the context in which a new word is presented, the learner gains a rudimentary understanding of it as he discovers its relation to each other word in the sentence and the meaning it is intended to convey. Thus, as a new word is experienced, either in written or in oral form, the learner examines it in relation to his past experiences and associates it with the particular context in which it is presented. If it has meaning, it is useful to gain further clarity of expression in new situations as they arise. Always the learner examines new concepts in relation to what is already known and, once they become understood, applies them in new situations.

The dictionary illustrates the latter generalization. The dictionary is helpful when the synonyms, illustrations, and sample uses in phrases are more directly related to experiences of the reader than is the original word. The dictionary is not helpful when definitions are not meaningful. The particular word found in the dictionary is not added as a new concept unless it is used or understood in context other than that presented in the dictionary.

Reëxamination of the steps outlined in the development of concepts reveals this sequence:

1. In a variety of concrete situations, involving sensory experiences, rudiments of vocabulary are learned.

2. These words are experimented with in other situations—short sentences to convey meaning to others.
3. As maturation and learning proceed, increasingly more and new relationships are discovered. More objects and relationships are explored in the environment and are analyzed.
4. Increasing meaningfulness of the concept is established through differentiation and integration of experience. "Dog" becomes meaningful as broader experience with dogs is established and as the learner identifies similarities and differences.
5. When concepts are meaningful as abstractions, practice leads to higher levels of understanding. At this stage the learner profits from practice with understood symbols and uses them to understand new concepts.
6. When concepts have meaning, semi-abstractions and abstractions—pictures and printed words—are substituted for concrete objects.
7. With practice in use of the concept, applications for further use are discovered.
8. Use of the concept in new situations fixes the learning.

Throughout this sequence, four principles clarifying the developmental nature of learning emerge: (1) Learning is continuous, not abrupt; (2) learning proceeds from simple to complex; (3) learning proceeds from familiar to new; (4) learning proceeds from concrete to abstract. Examine these principles as guides to other kinds of learning, such as playing a musical instrument, solving an arithmetic problem, conducting a scientific experiment, operating a machine, learning appropriate and inappropriate conduct, and learning control of emotional expression. Although the exact sequence of a learning activity may be unknown, these four developmental principles apply to all learning products.

PRACTICE IS NECESSARY FOR DEVELOPING SKILLS

The statement that practice makes perfect is a half-truth, for repetition of errors produces imperfection as repetition of correct procedures and responses leads to perfection. The kind of practice, the amount and distribution of time in practice, the kind of skill being developed,

and the functional limits of the individual in the skill are important considerations in deciding practice procedures.

Kind of Practice. The kind of practice necessary for improvement is that for which the learner sees the need and which is carried out according to correct procedures. Repetition is purposeless and even harmful unless carried out in an increasingly meaningful and efficient pattern. Repeating mistakes produces habitual error responses. Meaningless repetition of a poorly understood concept, democracy, for example, does not lead to better understanding, as one concrete experience in democratic living might. The "hunt-and-peck" system of typing, the "dog paddle" stroke in swimming, the coloring of "ready-made" outlines, and reading with lip or finger movement are samples of incorrect procedures repeated until they become habitual error responses.

When practice is first introduced, two factors are important in the teaching process: (1) Make sure the learner sees the need for the practice so that he does not become bored and frustrated, and (2) provide the guidance whereby the learner strengthens the correct form and procedure and eliminates the incorrect before it becomes firmly established. To provide effective guidance, the teacher must clearly understand the character of effective performance; preferably demonstrate it.

Distribution of Time in Practice. The amount and distribution of time spent in practice are matters requiring a great deal of experimentation in the classroom to find the optimum. Generally, distributed practice yields better results than massed practice. Suppose a group of tenth-grade students had four hours per week to be spent in swimming, singing, public speaking, or shorthand. Would it be better to distribute the time in two periods of two hours each, in four one-hour periods, or in eight thirty-minute periods? There is no one answer because the optimum length and spacing of practice depends upon the particular learning and upon the range of differences among the learners. At different levels of development in a skill, the optimum length of practice varies with the development. Short, frequent periods appear more effective after some skill has been developed. Also, the spacing between periods may be shorter with higher level of skill. Some individuals center their attention on a particular task much longer than do others.

There is some indication that with increasing age through the high schools years longer periods of time can be used profitably.

It is entirely possible that by using a variety of interesting materials and activities high schools students may profitably work for much longer periods of time than is the current practice. The limitation set by the one-hour class period undoubtedly constitutes a serious handicap to building the kinds of skills which are possible among high school youth.

Whole or Part Skills. Particularly in the teaching of motor skills, analysis of the whole skill must be made to determine most effective practice procedure. Some skills need to be broken down into parts; others can be mastered as wholes. To grasp the wholeness of the skill early is essential for efficient learning. For example, at the start in learning to swim, blocks of time successively spent in arm, leg, and breathing exercises yield poorer results than floating and underwater swimming. The learner who has good leg and arm movement and who can breathe while holding to the side of the pool does not swim until he has coordinated his movements into swimming. Swimming is more than the sum of part skills; it is a skill requiring total body coordination and control. Drill in specific parts does not lead to superior performance unless the learner sees the relationship between the parts and integrates the parts into a unified whole.

With many kinds of learning there is disagreement as to how small the parts should be. Questions like the following need to be answered: (1) Do students learn shorthand most readily through practicing individual letters first and then phrases and sentences? (2) Do students learn to play a musical instrument most efficiently by practicing the notes first and then a small composition? (3) Do students learn to draw most efficiently through mastering different media and then producing first sketches? (4) Do students memorize a poem most efficiently one line at a time? Generally, the answers are negative; but as yet teachers need to do a great deal of experimentation to discover how skills which they teach may be broken into parts to produce most efficient learning. The most effective method depends upon the difficulty of the task and the length of time involved in its mastery, also upon

the individual's abilities and his previously established methods of attack.

Functional Limits. Functional limits of learners are highly variable in most secondary classrooms. Amount and kind of practice are subject to modification as physiological and psychological limits are approached. No group of teachers would like to have, as the primary condition of renewing a contract for the subsequent year, a requirement of running one hundred yards in ten or even fifteen seconds. The amount of effort needed to meet this requirement would constitute a serious strain on functional limits. Some would never achieve it because physiologically they could not; psychologically few would try to achieve it because of its unrealism.

Boys and girls in secondary classrooms also vary widely as to physiological and psychological limits of performance. Functional limits of individuals differ from day to day because of emotional factors—breaking up of the home, a quarrel with a boy friend, losing a football game, and the like. It is entirely probable that many youth currently enrolled in classes throughout the country are being frustrated because teachers set up standards of performance as if the functional limits were the same for all students. With the knowledge that more practice is needed to increase units of skill at higher levels than at lower, time must be modified to take into account different levels at which the students are. If, because of school organization or numbers in class, no variable time limits can be arranged for students to achieve an identical standard of performance—thirty words per minute in typing at the end of the first semester—then differences in performance should be expected.

INSIGHT IS NECESSARY FOR EFFICIENT PROBLEM SOLVING

Insight is the mental process by which the learner perceives a relationship between parts of a problem; because of it, he can readily solve the problem which previously he could not. Once this kind of solution is attained, the learning can be reproduced in new or similar situations without practice.

Constructing one triangle identical to another may be used to illus-

trate insight in problem solving. The learner has a protractor, ruler, pencil, and a given triangle. He is faced with the problem of using these materials to produce another triangle identical to the one given. He perceives, after some experimentation, that measuring the base and two adjacent angles of the original triangle and then constructing another with equal base and adjacent angles produces an identical triangle. Thus, he perceives all the elements in the problem—the materials, methods, solution, and the relationships among them. When these relationships are perceived, insight into the solution occurs.

Insight in problem solving challenges two frequently discussed characteristics of learning: "blind" trial-and-error learning and "meaningless" repetition. Trial-and-error learning, as often interpreted, implies a searching for an answer in which solutions are found accidentally. Applied to the classroom, this means that students work on problems, first going in one direction and then in another, until a chance activity leads to solution. Insight in problem solving means that the learner purposefully directs his activity toward solution of the problem, brings his previous learnings to bear on the solution, experiments with most reasonable hypotheses leading to solution, and discovers one that works. Thus, the solution is the product, not of chance factors or blind searching, but of intelligent activity directed toward perceiving relations and structuring them in a unified response pattern.

Insight poses a challenge for any kind of drill which is initiated on either of two assumptions: that formal drill should come prior to perceiving solutions, and that drill serves as a method for producing understandings. Refer to the drawing of identical triangles again. Suppose the teacher drilled the learner in the separate steps in producing identical triangles prior to his perceiving the whole structure. It is entirely possible that the learner might go through the steps of measuring base line, adjacent angles, and step-by-step plotting of identical triangles without perceiving the whole structure. Many students who can prove the Pythagorean theorem perfectly, step by step, cannot use their knowledge to compute the length of a brace for a stairway or foundation of a house.

The degree to which insight operates in problem solving depends on such factors as mental maturity, previous related learning, and the

manner in which the problem is presented. Teachers can do much to organize learning activities so that relationships are readily perceived. The plot of mystery stories is so arranged that correct solution is not discovered until the climax; many clues are presented which lead to false solutions. Skilled teachers organize learning activities so that the learner readily perceives significant relationships. Irrelevant details and confusing arrangements which block perception of significant relationships are avoided.

MEANINGFUL LEARNING TRANSFERS TO NEW SITUATIONS

Public schools are supported on the assumption that what is learned in school will be used outside school. Since the founding of our educational system, one purpose of the school has been to produce better citizens. Two broad approaches to the problem have been tried and are practiced today. The first approach is to include in the curriculum learnings which are used by adults so that when students finish school those understandings and skills are ready for use. The second is to teach students how to solve the problems which they encounter while going through school. By learning to meet current problems satisfactorily, they can better meet the situations which may arise in adult life. Transfer of training, which means using what has been learned in one situation in a new or different one, has been subjected to much investigation; and three major theories have been proposed. Each of these needs examination; for teachers, consciously or inadvertently, follow one or all of them in organizing classroom learning situations.

Formal Discipline. The formal-discipline theory of transfer is based on the assumption that mental faculties or powers of the mind are identifiable and exist quite independently of each other. Such faculties, according to the theory, include memory, reason, attention, will, imagination, and others, and may be strengthened through practice much as muscles are strengthened. Systematic drill may be set up whereby mental faculties are exercised so that performance in different situations becomes more effective. This theory was formulated when mental processes were poorly understood and it was thought that certain parts of the brain were responsible for memory, reasoning, and the like.

In accordance with the theory, memory drills—it made no difference what was memorized—were employed to build the memory faculties. Long and hard assignments were supposed to fortify the faculties of will power and attention. Latin, geometry, and astronomy were thought to have inherent qualities which, when taught as drill subjects, built many faculties such as observation, reason, will, and memory simultaneously.

Some teachers of geometry apparently still believe that the memorization of step-by-step proof is the important contribution of geometry because this supposedly increases reason and memory. Some teachers of foreign language apparently believe that teaching the form of ancient literature through analysis of sentence and paragraph structure helps the learner organize his thought processes into neat, efficient, formal patterns.

All evidence points to the fallacy of mental discipline as the basis for transfer. Material of any kind which is not understood, regardless of how well it may be memorized and however much drill may be spent on it, does not transfer to new situations in a meaningful way. This statement does not deny that drilling a child in a particular belief and punishing or making him feel guilty for examining critically any other belief may lead to firm acceptance of the belief. Sufficient evidence is available related to thought control as practiced in the schools of Nazi Germany and Imperial Japan to indicate that individuals may be taught to accept certain beliefs without examining them critically. These beliefs, of course, do guide behavior in many situations.

Identical Elements or Components. Another theory assumes that the elements present in the original learning must also be present in the new learning which it facilitates if transfer is to occur. The identical elements may be facts or skills. Thus, after the learner has mastered the addition facts, he can use them in all sorts of problems involving addition; the same applies to percentage, fractions, and the like. With reference to skills, when the learner has mastered the skill of using an appendix in one kind of book, that skill transfers to using other appendices which have identical organization.

Generally, this theory has been supported. Where problems have

identical elements, transfer occurs. However, situations may be very much alike and still very different. In multiplication, for example, placing a decimal point in the multiplier makes a different problem. Unless the learner understands use of decimals, his skills in adding, subtracting, and multiplying will not transfer to get a correct solution to the problem.

The proponents of identical elements can point with some pride to the history of secondary curricula and show that many practical subjects have been added in which the facts and skills needed to make a living are now part of every modern high school curriculum. When a school wishes to assist girls to become better homemakers, classes in home economics are recommended, not foreign languages and higher mathematics. When boys are to be assisted in getting factory jobs, welding, machine operation, woodworking, auto mechanics, and blueprinting are offered, not advanced physics and astronomy. To help students become better farmers, animal husbandry, soil conservation, and various farm projects are included. By proving the theory of formal discipline inadequate as a basis for selecting learning activities and teaching method, the proponents of identical elements rendered a great service to high school instruction and curricula.

Two major inadequacies have arisen through implementing the identical-components theory: (1) Piecemeal learning is encouraged, and (2) much of what students learn in school is forgotten very quickly because it is not used immediately. When we try to teach specific facts and skills which youth may meet as adults, we often do not help them solve important problems which they meet now. Although they need not have been, the secondary curricula of the early 1900's were organized to include many separate subjects taught in short instructional periods; and within the subjects much attention was given to imparting specific facts and skills. Justification for including the separate facts and skills was that adolescents, especially those who went to college, used them frequently.

Generalization. Generalization is the process of discovering basic principles and relationships in conceptual kinds of learning and of discovering principles underlying skills. The learner arrives at generaliza-

tions and principles through undergoing specific experiences, picking out common elements, identifying basic processes, and organizing them in a meaningful way. Principles and generalizations thus learned are used in new situations.

Judd, McConnell, Gates, and many other researchers have investigated transfer by generalization related to school subjects. McConnell, for example, studied methods for teaching arithmetic facts to second-grade pupils. One group's instruction was confined to drill on specific, separate addition and subtraction facts. For the second group, instruction emphasized getting meaning and seeing interrelationships among the facts. On all four tests of learning used in the study, the second group was superior to the first. One conclusion reached from this and other studies is that the learner who generalizes on the basis of perceiving relationships among specific facts, skills, and methods of attack in a given situation is able to use such learning more adequately in new situations than is he who has mastered the specifics without perceiving relationships and getting meaning from his learning activity.³

Transfer by generalization is an extension of transfer by identical components; the new learning has to have enough commonality for the learner to see application of the previously learned generalization, else no transfer occurs. Generalization provides a more mature and broader viewpoint toward effective instructional procedures. When teacher and learner are freed from the monotony of isolated and multitudinous specifics, interesting and worth-while activities can be organized and a higher quality of learning achieved.

We may now make four general statements concerning transfer of learning which apply to the teaching process: (1) Formal discipline as the basis of transfer should be completely discarded; (2) the more nearly identical in-school activities are to life activities outside the school, the more transfer occurs; (3) generalizations are used more frequently and forgotten less rapidly than are specific facts and information; and (4) method of teaching in which students are taught to perceive relationships, to get meaning from their work, and to apply what

³ For a summary discussion of transfer, see Arthur I. Gates, et al., *Educational Psychology*, New York, The Macmillan Company, 3rd ed., 1948, pp. 486-521.

is learned in one situation to another situation secures greater transfer than does methodology which leaves application to chance factors or to the learner's ability to discover applications.

PROCEDURES FOR INVESTIGATING CLASSROOM LEARNING

Investigating the learning of youth in one's classroom makes teaching highly fascinating. Teachers need to examine characteristics of the learners and of the learning situation in order to build efficient methods. The better method depends upon the qualities and characteristics of the learners and upon the concept or skill being taught. Six sample types of investigation dealing with problems presented in this chapter are outlined.

The purpose of the first is to determine whether differences in mental maturity increase, decrease, or remain constant at different grade levels in a *particular* high school. In a school which has a reliable testing program, get the highest and lowest mental age as revealed in school records for grades seven, eight, nine, and ten. Determine what happens to this difference at the various grades. In case IQ score is reported but not mental age, multiply IQ score by actual chronological age noting placement of the decimal point. This yields mental age. For example, if the actual age is 16 and the IQ score 120, mental age is 19.2 years; if actual age is 16 and IQ score 75, the mental age is 12. Eleventh and twelfth grades may be included in an investigation of this type provided those students with lower IQ have not been eliminated already. To some extent elimination may already have occurred in the lower grades; also older students, who have been retarded a year or two, may be found in the lower grades.

The purpose of the second is to discover whether differences in achievement increase, decrease, or remain constant at different grade levels in a particular school. Get achievement test results at successive grade levels in reading, arithmetic, spelling, or some other area. Usually scores are given in grade-placement levels. Find the highest and lowest scores at successive grade levels and compare the differences obtained. A revealing experience is to go to a combined elementary,

junior, and senior high school and compare range in reading achievement at these three levels. For most persons the results obtained are both intriguing and highly informative.

The third type of investigation proposes to ascertain whether differences increase, decrease, or remain constant with equal amounts of practice and at the same time to determine how much gain individuals make. In any activity where each member of the group has developed a measurable amount of skill, give a preliminary test to determine each individual's score. Secure the coöperation of the group and for a period of three to eight weeks, depending upon length of time required to produce an increase in the particular skill, have practice only during regular class time. Measure the group again at the end of the practice period and compare initial with final score. Note what has happened to the range of scores and to relative position of individual scores, and find which individuals have made greatest gains. A wide variety of skills such as typing and shorthand, swimming and running, playing musical instruments, solving problems in mathematics and science, and writing friendly letters may be investigated in this manner.

In the fourth type of investigation the purpose is to determine whether memory of unrelated facts can be increased. First, give an initial test composed of a series of unrelated numbers in groups of five, six, seven, eight, and nine to determine each student's initial ability to reproduce these numbers. (Directions for administering such a test and an eight-digit series of numbers are outlined in Lewis M. Terman and Maud A. Merrill, *Measuring Intelligence*, Houghton Mifflin Company, 1937, p. 128.) Second, use a ten-minute period each day for a week or more in practicing memory of unrelated numbers. Third, retest to determine what changes have occurred. Fourth, in another group, hereafter called the control group, administer the same series of initial and final tests but do not practice between first and last test. Compare results on the final test to determine what effect the practice had on increasing "memory" in both groups. Fifth, allow a period of several weeks or months to elapse. Again test and compare results in the experimental and control groups.

The fifth type of investigation is to determine the minimum mental maturity necessary to obtain a particular mark in a given area of work

or to obtain a certain grade level of achievement on a standard test. Here mental age must be obtained for each individual and plotted against grades given by teachers or against grade-level attainment as measured by a standard achievement test. Algebra and geometry tests and teacher marks may be used. After obtaining mental age, arrange the students by classes from highest to lowest in mental age. Next, plot standard test results, such results to be obtained by administration of the test during the semester or grading period. Now put in teacher marks; these may be the average for a semester or for a grading period. The form might be like this:

| Name of Student | Mental Age | Standard | Teacher Mark |
|-----------------|------------|------------|--------------|
| | | Test Score | |

Compare the three different measures.

While experimentation of this kind may not yield an absolute answer, the information needed by a particular school to advise pupils or to change requirements or marking procedures will be available. If large numbers of such results are available during one year or over a period of years, the percentage of the group at different mental-age levels receiving a particular mark or standard score can readily be computed and organized according to the following pattern:

| Percent receiving | Mental Age | | | | | | ... | ... |
|-------------------|------------|----|----|----|----|--|-----|-----|
| | 18 | 17 | 16 | 15 | 14 | | | |
| A | | | | | | | | |
| B | | | | | | | | |
| C | | | | | | | | |
| D | | | | | | | | |
| F | | | | | | | | |
| Percent receiving | | | | | | | | |
| standard score of | | | | | | | | |
| 12th grade | | | | | | | | |
| 11th grade | | | | | | | | |
| 10th grade | | | | | | | | |
| ... | | | | | | | | |
| ... | | | | | | | | |

The sixth of the sample types of investigation deals with the efficiency of two methods of teaching to achieve a particular learning out-

come. Suppose that a teacher wants to find out whether students learn more generalizations by (1) spending half a period listening to lectures and the other half in reading or (2) spending half a period in group discussion of problems correlated with reading and the other half in reading. If two equivalent groups are available to the teacher—that is, if the teacher has two sections of the same class which are equal in the learning—these steps may be followed: First, administer a preliminary test to make sure that the two groups are equivalent at the start. Second, keep all teaching methods constant for the groups except the lecturing and the group discussion. Third, at the end of a period of time—a unit of work or a grading period—administer the same test on the generalizations to both groups and compare results. Fourth, now reverse the teaching method, that is, the lecturing and the group discussion, in the two groups. Fifth, construct another test and administer it to the two groups. Compare results for both administrations of tests. If one method is superior to the other and if the groups were equivalent at the beginning (usually a few students can be shifted or omitted on the basis of original score to make them equivalent), the mean score will be higher for each group taught by the superior method. That is, if lecturing produced a higher mean score during the first unit with group A, then it also should have produced a higher mean score during the second unit with group B when the method was reversed. Before drawing conclusions concerning the effectiveness of the two methods, one should find the difference in mean scores of the two groups and the statistical significance of the difference obtained. Procedures for doing this are outlined in the last part of Chapter 15.

A single question, "Which of the two methods of teaching do you prefer and why?" directed to the students will yield further information concerning the method this teacher might use thereafter with these groups. If the test scores are not greatly different between the groups, student preference may be a factor in arriving at a decision. Obviously, the results will be influenced by the particular teacher's attitudes and abilities, by the characteristics of the group, and by the particular learning outcomes sought. Therefore no generalization can be drawn as to which is the better method for all teachers. A conclusion *can* be drawn

as to which is the better method for this teacher with these groups in this particular learning situation.

These are but six of many investigations which may be carried out to determine important aspects of classroom learning. Each member of the teaching profession can grow in effectiveness through conducting investigations of the kind outlined. When one obtains the results for himself with the groups he teaches, he is likely to modify his practices in terms of the results. Learning to teach effectively involves active exploration and the building of meaningful concepts and skills.

SUMMARY

Learning is a process of organizing experiences into meaningful patterns of understandings and actions. Most classroom learning may be grouped into six major categories: motor activities; concepts and generalizations; motives, interests, and attitudes; social and emotional controls; aesthetic responses; and techniques of problem solving.

When organizing learning activities for adolescents, teachers should take into account basic generalizations underlying effective teaching-learning situations. First, differences which exist among adolescents in kind of ability and in amount of achievement must be identified and provided for if each learner is to profit most from instruction. Second, differences which exist among adolescents in readiness for a given learning activity must be considered so that learning commences where they are. Third, helping students plan activities, establish goals, measure progress, and develop success experiences elicits more consistent effort and purposeful activity than does use of punishment and reward. Fourth, the developmental sequence in learning is characterized by continuity, and the direction is from concrete to abstract, from simple to complex, and from familiar to new; teaching procedures should implement these principles. Fifth, practice of the right kind in the proper amount and distributed efficiently is necessary for the development of all skills. Sixth, learning activities should be organized so that students perceive important relationships and are not confused by irrelevant details or meaningless repetition. Seventh, meaningful learning transfers to new situations and is not forgotten quickly; teaching

come. Suppose that a teacher wants to find out whether students learn more generalizations by (1) spending half a period listening to lectures and the other half in reading or (2) spending half a period in group discussion of problems correlated with reading and the other half in reading. If two equivalent groups are available to the teacher—that is, if the teacher has two sections of the same class which are equal in the learning—these steps may be followed: First, administer a preliminary test to make sure that the two groups are equivalent at the start. Second, keep all teaching methods constant for the groups except the lecturing and the group discussion. Third, at the end of a period of time—a unit of work or a grading period—administer the same test on the generalizations to both groups and compare results. Fourth, now reverse the teaching method, that is, the lecturing and the group discussion, in the two groups. Fifth, construct another test and administer it to the two groups. Compare results for both administrations of tests. If one method is superior to the other and if the groups were equivalent at the beginning (usually a few students can be shifted or omitted on the basis of original score to make them equivalent), the mean score will be higher for each group taught by the superior method. That is, if lecturing produced a higher mean score during the first unit with group A, then it also should have produced a higher mean score during the second unit with group B when the method was reversed. Before drawing conclusions concerning the effectiveness of the two methods, one should find the difference in mean scores of the two groups and the statistical significance of the difference obtained. Procedures for doing this are outlined in the last part of Chapter 15.

A single question, "Which of the two methods of teaching do you prefer and why?" directed to the students will yield further information concerning the method this teacher might use thereafter with these groups. If the test scores are not greatly different between the groups, student preference may be a factor in arriving at a decision. Obviously, the results will be influenced by the particular teacher's attitudes and abilities, by the characteristics of the group, and by the particular learning outcomes sought. Therefore no generalization can be drawn as to which is the better method for all teachers. A conclusion *can* be drawn

as to which is the better method for this teacher with these groups in this particular learning situation.

These are but six of many investigations which may be carried out to determine important aspects of classroom learning. Each member of the teaching profession can grow in effectiveness through conducting investigations of the kind outlined. When one obtains the results for himself with the groups he teaches, he is likely to modify his practices in terms of the results. Learning to teach effectively involves active exploration and the building of meaningful concepts and skills.

SUMMARY

Learning is a process of organizing experiences into meaningful patterns of understandings and actions. Most classroom learning may be grouped into six major categories: motor activities; concepts and generalizations; motives, interests, and attitudes; social and emotional controls; aesthetic responses; and techniques of problem solving.

When organizing learning activities for adolescents, teachers should take into account basic generalizations underlying effective teaching-learning situations. First, differences which exist among adolescents in kind of ability and in amount of achievement must be identified and provided for if each learner is to profit most from instruction. Second, differences which exist among adolescents in readiness for a given learning activity must be considered so that learning commences where they are. Third, helping students plan activities, establish goals, measure progress, and develop success experiences elicits more consistent effort and purposeful activity than does use of punishment and reward. Fourth, the developmental sequence in learning is characterized by continuity, and the direction is from concrete to abstract, from simple to complex, and from familiar to new; teaching procedures should implement these principles. Fifth, practice of the right kind in the proper amount and distributed efficiently is necessary for the development of all skills. Sixth, learning activities should be organized so that students perceive important relationships and are not confused by irrelevant details or meaningless repetition. Seventh, meaningful learning transfers to new situations and is not forgotten quickly; teaching

method which emphasizes building meaning is the primary factor in producing transfer and retention.

Teachers must know the learning characteristics of their students and should investigate phases of the teaching-learning situation to develop better instructional methods. The best method is that which works most effectively with a particular group of adolescents in building particular learning products.

QUESTIONS AND ACTIVITIES

1. Explain the learning process in relation to dancing, playing a musical instrument, or some other skill which you have developed.
2. Identify important instructional outcomes related to your area of teaching and group them into the six categories as described by Anderson and Gates.
3. How greatly do adolescents at age fifteen vary in such characteristics as achievement test score in high school subjects, mental age, emotional controls, interests, and artistic skills?
4. Select a specific instructional outcome, e.g., learning to solve problems involving use of positive and negative numbers, and list what you consider important readiness factors related to it.
5. How may use of rewards or punishments serve as incentives to learning? Why are rewards more suitable than punishments? What are the major objections to widespread use of rewards?
6. How are success and failure related to teacher-student planning of class work? How does knowledge of progress serve as a motivating force?
7. Review the developmental sequence in learning vocabulary. Outline a sequence for learning typing, conducting a science experiment, developing skill in conversing with others, or some other learning activity.
8. Make a list of guides to govern practice procedures. Apply these to the teaching of a skill for a week or a month.
9. What guides to teaching do you draw from the discussion of insight?
10. Set up a brief list of teaching procedures which would follow from putting into practice each of the three theories of transfer.

11. Arrange the six procedures for investigating classroom learning (a) in the order in which they may be carried out most easily and (b) in the order of probable value to the teacher. What would be necessary for a college class to carry out some of them?
12. What are the major problems of learning which you need to investigate in order to teach most effectively?

REFERENCES

-
- Carmichael, Leonard (ed.), *Manual of Child Psychology*, New York, John Wiley and Sons, 1946, chaps. 16, 18, 19.
- Hilgard, Ernest R., *Theories of Learning*, New York, Appleton-Century-Crofts, Inc., 1948, chaps. 1, 8, 12.
- Mursell, James L., *Successful Teaching*, New York, McGraw-Hill Book Company, 1946, chaps. 3, 4.
- National Society for the Study of Education, *Intelligence: Its Nature and Nurture, Thirty-Ninth Yearbook*, Bloomington, Public School Publishing Company, 1940, Part I.
- National Society for the Study of Education, *Learning and Instruction, Forty-Ninth Yearbook*, Chicago, University of Chicago Press, 1950, Part I, chaps. 1, 2, 12.
- National Society for the Study of Education, *The Psychology of Learning, Forty-First Yearbook*, Bloomington, Public School Publishing Company, 1942, Part II.
- Prescott, Daniel A., *Emotion and the Educative Process*, Washington, American Council on Education, 1938.
- Rugg, Harold, *Foundations for American Education*, Yonkers, World Book Company, 1947, chaps. 3, 4, 5, 6, 7.

CHAPTER 4

The Nature of Democratic Living

The individual's concept of how to govern self and how to contribute to governing others is closely related to the home, the school, the neighborhood, the state, and the nation in which he grows and lives. Every community and nation has its peculiar way of life which, through education, is transmitted to youth. Besides having a background of history and tradition, every nation has ideals. These ideals must appeal to a large portion of the population and be practiced in the home and other social institutions if the nation is to continue to be a happy place in which to live. Most of the people must work toward common goals to develop morale and effective citizenship. When ideals vary widely among groups and they seek conflicting goals, a nation becomes divided as in the Civil War.

We know that individuals learn attitudes and values; they may learn to work together harmoniously or to quarrel and fight. Some homes are characterized by friendly relationships, some by argument and strife. In some classrooms morale is stimulating and work output high; in others morale is depressing and work output low. In some communities prejudice and discrimination are rampant; in others harmonious relations exist as among friends and neighbors. What do high school teachers have to do with these things?

The goals of secondary education and of democratic living include building understandings, skills, and values whereby individuals associate harmoniously in group life. If the school is to contribute to building democratic citizenship, the methods and materials of teaching must be

selected and organized to achieve these goals. If democratic living is to transfer from the classroom to the home and community, emphasis must be directed toward building democratic ideals and practices. Ideals are necessary to serve as guides for classroom methodology.

Ideals are merely abstract words unless they are built on meaningful experiences. For a maturing individual to learn democratic behavior he must have experiences with adults who themselves exhibit such behavior. What are the democratic ideals to guide classroom activities and what are methods appropriate for attaining them? We shall examine five ideals of democracy first, then analyze procedures for achieving them, and finally outline methods for studying community forces which implement them.

THE IDEALS OF DEMOCRATIC LIVING

Democratic living will be strengthened when these ideals are operative in the conduct of all citizens, young and old: (1) Every person respects the unique individuality of every other person; (2) every person employs intelligence rather than force in the solution of problems; (3) every person coöperates for the welfare of the group; (4) every person accepts responsibility for his activities in a society of free men; and (5) every person accepts the hypothesis that men, individually and collectively, can improve the quality of living.

RESPECT FOR UNIQUE INDIVIDUALITY

When adults respect the unique individuality of children in the home or in the school, these provisions are made: (1) Each child feels that he belongs in the group, that he is wanted and worth while; (2) each child participates in the activities of the group; (3) each child feels that he has a place in the group, that he has status; and (4) each child feels secure in his group. These provisions are interdependent. No one is more important than the others. However, the order in which they are presented follows a developmental sequence which might be adopted by a teacher in meeting a new class.

A Feeling of Belonging. A feeling of belonging or affiliation with the group comes first in the home, the classroom, or the community. Adolescents, more than any other age group, want to belong to a group

or a crowd, to be known to their age mates, and to be accepted and sought by others. They want friends and chums. They dress and talk according to group standards. In many high school classrooms there are some who do not feel as if they belong. Their clothing is inadequate; they do not speak English well or read and write fluently; they cannot compete with others because of inadequate educational backgrounds; they do not know anyone in the class; or they come from homes "across the tracks." There are many reasons why adolescents do not feel at ease and comfortable with their age mates or with teachers and other adults.

For teachers to help students develop a feeling of belonging, careful examination of their own attitudes toward persons of different race, religion, nationality, socioeconomic status, mental abilities, and personal idiosyncrasies must be made. A teacher may be prejudiced and not discriminate against children when such prejudice is known and understood by the individual himself. When it is not recognized as prejudice, discrimination is sure to follow because it is not understood as such. Discriminatory comments such as "the dumbbell group," "mental cripples," "future delinquents," "no-good (whatever racial, religious, or nationality group is the minority)," "chronic liar and cheater," "poor trash," and the like are indicative of prejudiced reactions. Such name calling is destructive to good intergroup relations and violates respect for individuality.

Children have no choice in the matter of skin color, home location, attitudes and beliefs held and taught by parents, mental characteristics, physical defects, special aptitudes or lack of them. Respecting the unique individuality of each student means accepting him as he is and helping him to become a part of the classroom group so that he can contribute according to his abilities and backgrounds. The teacher must accept him not only for what he is but also for what he may be—a worthy citizen. By not accepting the student as he comes, the teacher provides little possibility for helping him better himself or the group of which he is a part. If the teacher cannot accept the student, how can students be taught to respect one another? Further, if they do not respect one another, they will not participate coöperatively in work activities.

Participation in Group Activities. When a person feels he belongs

in a group, he takes part in group activities; conversely, when he feels he is not wanted, he remains aloof and isolated, thereby losing opportunity to learn from the group. Three developmental needs of adolescents—making satisfactory heterosexual adjustment, achieving emotional maturity, and achieving independence from adult control—require interaction with age mates. To become socialized, one must learn socially approved behavior. Such behavior is learned through group activities more effectively than through individualized activity. Social skills, which can be built only through associating and interacting with others, are necessary learnings in all phases of democratic living.

Teacher attitude is a primary factor in determining whether class time is spent in group activities. Many high school teachers have never been in a class where group projects were planned and carried to completion by them as students. At the present time, nursery schools and kindergartens center most attention on socializing children; at this age children are least ready to engage in any but very small groups. In the elementary school years continuing group activities such as play periods, recesses, caring for pets, and making clay models of grounds and buildings are given much attention. Then junior high school years begin with heavy emphasis on subject specialization. Teachers who are expert in areas of knowledge teach subjects while early adolescents go from one room to another, one teacher to another, to get ready to pass senior high school subjects. In senior high school they drill to meet college entrance requirements; thus school becomes preparation for further schooling. Teachers who have come through such schooling and who have profited as individuals find it difficult to organize group activities wherein students learn to participate effectively with others.

Participation with others in the home and in the school—in all social groupings—is a requisite for democratic living. One learns to govern self and others through participating in many activities wherein goals to be achieved are formulated by the group, projects are planned by the group, and rules to be followed have group origin. From the smallest informal group to international government these procedures apply, and through them individuals develop status feelings.

Status in the Group. To discover how one rates among his peers is evidence of normal curiosity, to know that one rates well is satisfying,

to know that one is rejected is frustrating, and to remain indifferent when rejected indicates serious personality conflict and maladjustment. Status means knowing one's position and feeling that such position is respected by others.

Children first learn status feelings in the homes and neighborhoods in which they are raised. They learn ways of behaving, attitudes, and values common to others like themselves, and through such learning, status feelings develop. If a child achieves status through bullying his younger companions in the neighborhood, he will try the same at school. If he is treated as of no worth in his home or neighborhood, he will feel inferior at school. If his parents, brothers, and sisters regard themselves as superior to other persons living in the neighborhood or community, he will probably feel the same. These feelings are reinforced unless the school helps individuals to change attitudes toward themselves and others.

In democratic life and schools the abilities of all children must be developed; further, many kinds of abilities have status value both in the larger democratic community and in the school. Each student develops a feeling of worth-whileness when activities are organized within the school which allow him to pursue a special interest or ability which has prestige value for children at the given age level. To tell students that everyone is equal and worth while is ineffective; to show, through actual classroom practice, that each may contribute something of worth to the class and that there are many different ways to make such contributions promotes status feelings for all. One technique which will assuredly lead to loss of status for many students is to reward only one kind of performance, such as reciting in class, doing well on tests, or reading rapidly. James, for example, may not understand the technical vocabulary of science, he may not recite well, his test scores may be lowest in class, and he may read very slowly. He may, however, collect specimens for laboratory work, take care of them, and thus gain the approval and respect of his classmates.

Security. Feeling relatively secure in one's home, neighborhood, and school is requisite for the development of a stable personality. To feel secure, each student must know that he belongs, that he has a share in conducting activities, and that his status is respected by the teacher

and other students. Little meaningful learning is possible for insecure individuals. The child who is unwanted, whose parents constantly quarrel, who feels that his siblings are treated better or loved more deeply by parents, or who has never received consistent affection from adults usually demonstrates insecurity in his everyday relations with others. The adolescent who has few or no friends in class, who constantly fears failure or criticism from the teacher, or who is unsure whether he is accepted also exhibits unstable behavior which reflects insecurity. Whether insecure feelings originate in the home or in the school, resultant behavior usually takes either of two forms in the classroom: withdrawing from active class participation or overcompensating through loud talking, boisterous conduct, and other attention-getting devices.

A classroom characterized by security is one in which students have poise and self-confidence. They show faith in their classmates and their teacher, who in turn has faith in them. Students respect the teacher because they are treated as individuals worthy of respect. Students are friendly and considerate of one another; they show genuine concern about the problems and activities of one another. Each one feels that he is helped with problems arising in school because the teacher and classmates want to help him. This situation will neither exist nor develop when students feel their security is threatened by procedures such as the teacher's (1) using punishment arbitrarily or capriciously, (2) allowing members of a class to criticize or ostracize another student because of a condition over which he has no control—low verbal ability, inadequate clothing, speech defect, etc.—and (3) organizing the situation so that only a few students feel success related to their class work.

You may apply these same three conditions to the home or other social groups and will probably conclude that a feeling of security is basic for normal personality development and effective democratic relations in all social groups.

INTELLIGENCE RATHER THAN FORCE IN SOLUTION OF PROBLEMS

Intelligence is the unique quality of human behavior which enables man to analyze the past and present and to project action and consequence into the future. Man's intelligence enables him to adapt to a

changing environment, to change the environment, and to change himself. Most individuals have sufficient intellectual ability to solve their problems and to govern themselves. The potential for this kind of behavior is present in the fertilized cell; its development requires much learning. How much maturation and learning are necessary for a child to learn to solve the problem of taking care of his own and others' property, of playing football according to rules, of behaving in a socially approved manner at the junior prom?

Use of force appears early in the repertoire of human behavior. Parents start the learning by setting up requirements for the child which are easily enforced because of physical superiority. The five-year-old forcibly takes a doll away from a younger sister. In the neighborhood, the strong set the rules of the game which the weaker must follow. This pattern of using force becomes deeply ingrained in habitual behavior unless boys and girls learn to use intelligence in solving problems. The learning may come incidentally with maturity, but it can be hastened through exemplary conduct by adults and through intelligently guided activities for youth.

How much responsibility should be given high school students for exercising intelligence in solving their problems; conversely, how much force should the teacher use in making students conform to teacher rules and methods for working out problems? In a country run by a dictator, a few individuals tell others what to do, how to do it, and when to do it. In a democracy, citizens decide these things. Many decisions are made by the leaders in a democracy; but the decisions are always subject to the people, at election time if not sooner. The teacher, too, is a leader, who, because of maturity, experience, and position, must and should make decisions. These decisions, though, must also be subject to the criterion that students increasingly use more intelligence and the teacher uses less force. The effective leader is the one who becomes less needed as the followers develop intelligent self-direction to guide their activities.

It is possible that some high school students may have had no classroom or home experiences in which to develop self-control; therefore, they need much teacher direction. It is equally true that these individuals need opportunity to develop it if they are to be self-directive

outside the classroom and if they are to become intelligent self-governing adults. Teacher leadership must be integrated with pupil interest and need. Youth need opportunity for learning intelligent self-direction rather than submissive followership if democracy rather than dictatorship is to be encouraged.

Anderson measured three types of teacher-dominative and three types of teacher-integrative behavior in the classrooms of two teachers. He computed a mental health quotient for the particular classrooms studied and found that domination by the teacher, with evidence of conflict between teacher and pupils, tended to produce a low mental health quotient while integration, with evidence of working with the pupils, resulted in a relatively higher mental health quotient. Some abbreviated samples of dominative and integrative action are included to provide a framework for examining teacher behavior with respect to the democratic ideal under discussion.

Domination with evidence of conflict:

1. Teacher determines a detail of activity under duress or in conflict: "Don't do it that way. I'll tell you what to do."
2. Direct refusal: Teacher responds with "No" when pupil asks if he can do something.
3. Tells child to move to another part of the room.
4. Postpones with no reason given or future date set: "We can't do that now."
5. Employs disapproval, blame, shame, obstruction, or interruption to get different pupil behavior.
6. Uses warning, threats, conditional promises: "If you can't do what you're supposed to do, you'll have to go out in the hall."
7. Calls to attention: "J., face this way, won't you?"
8. Deprives of specific material, activity, right, or privilege. This includes punishment, sending out of room, keeping after school, sending to principal's office, and physical attack by the teacher: "When I have to speak to you three times about being noisy, we have no story, but get right into arithmetic."

Integration with evidence of working together:

1. Teacher helps child to define, redefine, or advance the problem. There must be evidence that the problem has been stated or accepted by the child.

2. Accord, approval, acceptance of contribution. This is a response to the spontaneous or self-initiated behavior of the child; approval where there can be several answers or new answers.

3. Extends invitation in response to the child's wish, suggestion, or expression of need.

4. Questions regarding the child's expressed interest or activity.

5. Makes statements regarding the child's expressed interest or activity.

6. Accepts responsibility for act that is inconvenient or unjust or unfair to another or admits own ignorance or incapacity.¹

This study indicates that force used by the teacher is unwise; the better way is to organize classroom activities in which a minimum of teacher command and a maximum of intelligence of both students and teachers is utilized.

COÖPERATION FOR THE WELFARE OF THE GROUP

Politically, the idea of coöperating on a local, state, and national level within a two-party system is generally accepted. Socially, citizens organize into labor unions, professional organizations, businessmen's clubs, service groups, and the like. The many college fraternities and sororities have been organized and continue to grow because individuals want to band together and find coöperation with one another advantageous for the whole group. These organizations indicate the willingness of persons to contribute time, dues, and loyalty for the welfare of themselves and others.

The efficiency of all adult groups probably would be improved if children, under adult leadership, were given opportunity to develop competence in identifying group goals, planning activities to achieve the goals, learning communication skills, defining and assuming responsibility for carrying out work activities, and evaluating the final outcomes of the group work and each individual's contribution. In school, home, industry, and government, opportunity for developing these skills varies widely according to how the work situation is organized and managed.

At the University of Iowa, Lippitt and White studied the behavioral

¹ Harold H. Anderson, "Domination and Socially Integrative Behavior," in Roger G. Barker (ed.), *Child Behavior and Development*, New York, McGraw-Hill Book Company, 1943, pp. 459-484.

characteristics of ten-year-old boys in club activities under three types of leadership: authoritarian, democratic, and laissez-faire. The researchers carefully controlled (1) the type of club activity, (2) the physical setting in which the three clubs met, (3) special characteristics of the boys in each group, (4) personality differences of the adult leaders, and (5) sequence of experimental club treatments. Through these controls and by careful observation of the boys in club activities, effects of the three types of leadership were ascertained.

By the design of the experiment, authoritarian leadership was executed thus: (1) All determination of policy was set by the leader; (2) techniques and activity steps were dictated by the leader, one at a time, so that future steps were always uncertain to a large degree; (3) the leader usually dictated the particular task and work companion of each member; and (4) the leader tended to be "personal" in his praise and criticism of the work of each member and remained aloof from active group participation except when demonstrating.

Under democratic leadership (1) all policies were a matter of group discussion and decision, encouraged and assisted by the leader; (2) activity perspective was gained during discussion period, general steps to group goals were sketched, and, where technical advice was needed, the leader suggested two or more procedures from which choice could be made; (3) the members were free to work with whomever they chose and the division of tasks was left up to the group; and (4) the leader was "objective" or "fact-minded" in his praise and criticism and tried to be a regular group member in spirit without doing too much of the work.

Laissez-faire leadership was executed thus: (1) There was complete freedom for group or individual decision, with a minimum of leader participation; (2) various materials were supplied by the leader, who made it clear that he would supply information when asked; (3) he took no other part in work discussion; and (4) infrequent spontaneous comments were made on member activities unless questioned and with no attempt to appraise or regulate course of events.

Some of the more important findings, stated in approximate ratios, were as follows: (1) Amount of time spent in group discussion was seventy-eight times greater under democratic than under authoritarian

leadership; (2) expressions of discontent were about ten times more frequent under authoritarian than under democratic; (3) purposeful ignoring of leader's remarks occurred four times more frequently under authoritarian than democratic; (4) group-minded remarks to members occurred three times more frequently under democratic than authoritarian; (5) three times more loafing occurred under authoritarian than democratic; (6) there was somewhat greater work output under authoritarian than democratic when leader was present with the boys, two to three times greater work output under democratic when leader was absent; work fell off very rapidly when the authoritarian leader absented himself, hardly at all for the democratic; (7) the democratic leader stimulated self-direction in the group six times more frequently than did the authoritarian; and (8) aggressiveness to members was slightly higher under authoritarian than under democratic leadership. Laissez-faire leadership ranked somewhere between authoritarian and democratic in expression of discontent, aggressiveness to members, and stimulation of group self-direction; laissez-faire leadership was highest in incidence of group-minded remarks to members, purposeful ignoring of leader's remarks, and loafing. Also, under the democratic leader, group morale was highest, disrupting incidents were fewest, the boys were happiest, they learned how to meet many of their problems through group discussion, and they wanted to continue their club activities.²

One concludes from this study that coöperation was fruitful for the boys as a group and for each individual. Each teacher should try to discover whether the conclusions are applicable to the age group he teaches.

RESPONSIBILITY FOR ACTION IN A FREE SOCIETY

Freedom has different meanings for various people: to do whatever one chooses so long as it does not interfere with the rights and activities of others; to live and let live; to let each individual do whatever he chooses so long as it is within the limits of the law; to say whatever one chooses, whenever and wherever he chooses, as long as it follows codes of decency; to select one's own vocation, religion, and mate; to

² Ronald Lippitt and Ralph K. White, "The 'Social' Climate of Children's Groups," in Roger G. Barker (ed), *op. cit.*, pp. 485-508.

remain unfettered by the mores and traditions of society. Each of these has an identical element, namely, individual freedom always involves the freedom of others. The human being from the moment of birth is dependent on others for satisfaction of his needs. As he matures, he becomes less dependent and procures his livelihood more directly. However, as our society has become more complex through industrialization, relatively fewer individuals can secure a livelihood except as others contribute to them and they in turn contribute something to others. An individual is free to the extent that others are free also. Freedom of speech, of decision, of religion, of political affiliation is possible only as others have such freedom. Psychologically, the individual is free only to the extent that the social groups in which he grows and lives permit him freedom from fear, from guilt, and from rejection.

What does freedom mean in democratic living? Freedom means acting on one's own intelligence in making choices and at the same time assuming responsibility for such action in the social groups of which the individual is a part. Thus, there are two distinct factors involved: first, acting on intelligence in making choice and, second, assuming responsibility for one's action in terms of self and others. The ideal is to have each individual develop both intelligence and social consciousness so that his actions gain a greater measure of freedom for himself and others. Much learning is necessary to achieve this kind of behavior; adult society largely controls both the examples set and the environment in which youth develop the learning.

Four Factors Which Reduce Freedom. When are individuals not free? What practices in a given society restrain rather than encourage freedom as defined? First, in any society where one group is bound to another, freedom is nonexistent for the bound group. An example is human slavery. Human slavery is the kind of subjugation which destroys personal freedom completely. When persons are bound and have no control over their economic, social, and political life, intelligence cannot operate. Economically, when individuals are bound to perform a particular kind of work over which they have no control, they are not free. Politically, when people are forced, by means of a police state, to submit to the edicts of a dictator rather than electing officials to make and enforce their laws, they are slaves and not free men. Political

prisons, concentration camps, displaced-person enclosures, and forced labor typify restraints of freedom.

Custom and tradition may act as restraining influences and deterrents to freedom. Using the criterion of intelligence as the basis for choosing action, we may say that custom and tradition restrain when they are accepted as guides for behavior without analysis. Conversely, they may liberate energy for other activities when they are examined critically and serve useful purposes. It is customary to wear a particular regalia at college graduation exercises. This tradition dates back to medieval times, to a time when the apprentice and master needed the garb and found it useful. Today it is a symbol, completely useless and inappropriate except for the occasion. This tradition has survived and probably will continue for some time. For those who feel no need for the color and atmosphere provided by the cap and gown, the tradition is a restraint of personal freedom; it definitely restrains those who have insufficient funds or who would prefer to spend their money for what they consider more worth-while things. For others it provides the freedom to center energy on other activities through accepting the wearing of the cap and gown as a pleasant part of college life. Customs and traditions have been built on their utility at a previous time; following them may or may not be intelligent at the present time. No doubt many would be changed were the younger generation given freedom of choice to discard or modify them.

A third factor which reduces freedom is disregarding what exists. Perhaps no other area illustrates this point better than selection of teaching and other careers among college students. After 1947, information was readily available to colleges and universities which predicted a serious undersupply of elementary teachers and an oversupply of secondary teachers in some subject areas. Many young women spent four or five years of hard work and study preparing for a life career in teaching only to find that no secondary positions were available for them in 1950, 1951, and 1952. Students preparing in other professions such as engineering and law were also unable to obtain positions prior to the Korean situation. Thus, mature men and women, among the most intelligent in the population, made choices disregarding what existed. College officials were largely responsible for

not giving the needed information to students. Is the high school partially responsible for many students' choosing a profession as a career when only a small fraction of high school students ever enter a profession?

A fourth impediment to freedom lies in obeying the will of others without investigating the motives of the dominators or the consequences of such following. Children growing up need direction and guidance from adults; however, the guidepost to intellectual maturity for adolescents is making their own decisions without adult imposition. The goal of democratic living is that citizens make their own decisions and follow them with progressively less dependence upon others. High school graduates and those who quit prior to graduation are expected to choose a vocation, to select a marriage partner, a religion, and leisure-time activities, and to vote, among other things. Blindly following parental or other adults in these decisions impedes rather than promotes freedom. The adult who as a child and adolescent was forced by parents and teachers to use his free time practicing a musical instrument without opportunity to develop social skills through playing and associating with age mates usually has limited freedom to enjoy adult life. He has one highly developed skill. Frequently such an adult, when finally freed from parental domination, gives up the skill and launches upon something new and different. Personal tragedies and family conflicts which result from adult domination of adolescent choice of vocation, religion, and friends bear mute testimony of the effect of blindly obeying the will of others.

Four Ways to Increase Freedom. There are at least four ways to increase freedom of youth. To act on intelligence in making decisions and to assume responsibility for such action is learned and is highly dependent upon the leader of the social group, the teacher in the classroom, and the parents in the home. Four major conditions can operate in the classroom to assist youth to develop a higher measure of freedom as defined: (1) Situations are provided wherein students become aware of alternatives; (2) more alternatives are provided which may be pursued; (3) probable consequences of action are examined; and (4) students develop increasing ability to assume responsibility for their actions.

To make a choice, at least two possible solutions must be present. When no opportunity is available for choosing—in other words, when only one solution is known—the student is not increasing his power to make rational decisions. Thus, a youth decides that he wants to prepare for a teaching career in elementary education. He is in the last year of high school and has a record which will admit him to many different colleges and universities. At this time he knows a great deal about the state university but nothing about other colleges, so he decides to go to the state university. Had he examined several different institutions from the standpoint of cost, reputation in educating elementary teachers, campus organizations, and the like, he could have assured himself that he was making an intelligent choice. As it is, he does not develop ability to make choices because he knows only one.

The ability to find solutions is closely related to the number of alternatives which are provided by the teacher in ordinary classroom situations. The attitude of seeking alternatives rather than being satisfied with one solution is learned through many concrete experiences. When the teacher suggests only one way to learn about employment by state and federal agencies, namely, reading a section in a textbook, the student has little basis for choosing and does not develop an inquiring attitude. Were the teacher to suggest that the class find out about government jobs, they would undoubtedly volunteer the following ways to do it: (1) Go into the community and talk to persons employed by state agencies; (2) go to the post office to get facts and information about civil service; (3) go to the library to find information; (4) bring someone into the class to explain city, state, or national regulations concerning employment; and (5) read what the text has to say. Thus, five alternatives would be available from which to choose. When situations like these are multiplied many times in secondary classrooms, the school provides youth with opportunity for choosing from among a number of solutions which are acceptable to the teacher and which involve rational thinking on the part of students in making choices. This learning is necessary to promote freedom.

Prior to taking action, possible consequences of the action need to be examined. Suppose a family is going on a vacation through a mountainous region to a particular resort area. There are three routes which may be taken. One is a major highway which is well marked and which

the family has driven several times before; a second is more circuitous, and well marked, but has not been traveled by them; a third is poorly marked and infrequently traveled by anyone but appears to go through especially scenic areas. What are probable consequences of taking each of the three? The first would result in a fast trip to the resort area giving more time to spend there; the second would take more time in travel but would offer new sights and experiences on the way; the third would require still more time and offer many new experiences, including getting lost, running out of gas with no filling stations near, spending nights in the car, and not reaching the resort area. Procedures to meet the latter emergencies could be provided and experiences enjoyed if such consequences were analyzed prior to acting. Any of the three routes might be taken depending on possible consequences the family chose.

Students need to have opportunity for analyzing the possible consequences of action and for taking responsibility for their actions. The latter, as freedom has been defined, means evaluating the consequences on self and others. For example, the junior class is to determine whether formal gowns or street dresses will be worn by the girls to the junior prom. Among this class are some girls who would like to attend but who cannot if formal gowns are required. If the majority votes for formal gowns, despite this knowledge, then each of those contributing to the decision must accept responsibility for having kept some other girl from attending. Majority vote, however often it may be useful in deciding political issues, needs close analysis whenever rights of others are involved.

In all areas of high school education, particularly in those related to affairs over which individual students have no control, such as monetary, racial, or nationality, special attention must be given by teachers to allowing students to make choices and to evaluate the consequences of their action. If they are not allowed to make the choice, they have no obligation to assume consequences for the decision was not theirs.

FAITH IN PROGRESS

Man's scientific and technological inventions have been combined to produce new wonders during the last decades. The inventions and tools in daily use have changed at an ever increasing rate. Examine a

few of these. In 1900 there were 1,356,000 telephones; in 1950 about 49,000,000. The radio was practically unknown in 1900; in 1949 more than 83,000,000 radios and about 4,000,000 television sets were used by Americans. High school boys and girls today hear radio programs at home and in the school which originate in all parts of the world. They see and hear what occurs today, and what is happening throughout the world is of vital concern to them.

In 1900 about 10,000 autos and trucks were traveling over rocky or muddy roads; in 1950 some 41,000,000 were speeding over super highways at rates above a mile per minute. The airplane was being discussed as a possible means of transportation in 1900; in 1949 more than 9,000,000,000 passenger-miles were flown. Planes were made to travel faster than sound. More youth learned to fly planes in 1950 than learned to drive autos in 1920.

What about energy to produce these greatly accelerated rates of production, communication, and transportation? Energy source has changed from wood to coal, to petroleum products and electricity, and now to atomic power. As these different forms of energy have been discovered, machines have been built to utilize and control them efficiently. Huge machines, producing vast quantities of finished goods, are controlled by the tips of human fingers. As wide use of petroleum and electrical energy has made goods and services available to the American population, so also atomic energy may provide the means for reducing economic misery throughout the world. It is entirely probable that goods and services may be produced in immense quantities so that it will not be necessary for nations to compete for economic survival.

Through tracing technological advance during the first half of the century, we discover many factors which encourage continuing faith in man's ability to master the environment. How have we fared in human relations from the most basic of institutions, the home, to international affairs? In 1890 one divorce occurred for every sixteen marriages; in 1950 the ratio was about one to four. In 1917 we engaged in the First World War to save the world for democracy. We won the war but had to save the world from fascism, 1941 through 1945, and from communism starting in August, 1950. During the early 1930's we had the worst mass deprivation of life's necessities ever experienced

in our history; this at a time when food was plentiful. Progress in human affairs has not kept pace with technological advances.

Man's scientific and technological inventions have created the means for freeing him. They may also be used for destroying his freedom and his very existence. Significantly, production rate and new inventions, including the harnessing of the atom in bombs, reached greatest height when stimulated by war. The greatest intellectual resources from several nations were utilized in producing the bombs. Can we control the atom to continue progress? Faith in man's ability to invent new social arrangements and political institutions and to use those already in existence more efficiently is necessary as a starting point. Technology is the product of man's intelligence. Men, individually and collectively, are able to improve human associations and control them for the common welfare.

Starting in the home where only a few individuals are concerned and progressing to international affairs where all the nations of the world are involved, human associations need to be improved. Every high school teacher can assist youth to build understandings and social skills to get along better with one another and with adults. Faith in progress in the realm of human affairs will thus be strengthened through providing concrete experiences in democratic living—concrete experiences in which the ideals previously outlined are practiced.

ACHIEVING THE IDEALS OF DEMOCRACY

The daily face-to-face relations which teachers have with adolescents profoundly affect their attitudes and values. In formal and informal activities with one another adolescents learn democratic values and behavior under the guidance and supervision of teachers. Teacher-youth relationships are crucial in the survival and progress of American democracy. Their kind and quality are closely related to the instructional and class-management procedures which the teacher employs. Along with pupil-teacher interaction, particular areas of instruction related to democratic living, the special services provided by the school, and the way in which the whole school is managed are important factors which influence the achieving of democratic values and ideals.

AN ANALYSIS OF TEACHERS' RELATIONS WITH PUPILS

Baxter made an analysis of classroom teaching situations in the elementary grades related to achieving the ideals of democratic living. The behaviors of effective teachers and noneffective teachers are so vividly and clearly described that we shall quote from this study. In the left-hand column are characteristics of the effective teacher and directly opposite are those of the noneffective teacher. As you read these, indicate whether you agree, disagree, or are not sure that the effective type of teaching behavior is superior in achieving the ideals of democratic living.

Effective Teachers

1. Having the ability to remain self-controlled in midst of conflicting demands.
2. Poised and efficient in directing several simultaneous activities.
3. Habitually quiet, poised, and courteous in relations with children.
4. Constructive and encouraging in comments and manner.
5. Conversational and friendly in relations with pupils.
6. Eliciting willing response from children.
7. Participating with interest in pupils' activities.
8. Interested in helping pupils to direct their own conduct rather than securing conformity through personal domination.
9. Possessing sufficient self-restraints to allow children to work through their own problems.

Noneffective Teachers

- Displaying an inadequacy to classroom demands, easily disturbed.
- Confused and bothered by interruptions and unforeseen demands.
- Demanding, imposing, impatient in relations with children.
- Resorting to threats and punishments, sarcastic, cross.
- Tense, stern, and unfriendly with children.
- Eliciting apathetic, even antagonistic, responses from children.
- Always the director of children's activities—never a participant.
- Asking children to conform to the teacher's way.
- Imposing directions and requirements upon children, oblivious of pupil initiative and resourcefulness.

- | | |
|---|--|
| 10. Evidencing a planned but flexible procedure with materials and individual needs anticipated. | Absorbed in controlling the immediate situation—no plan in evidence. |
| 11. Careful in planning with pupils and in guiding them to successful completion of undertakings. | Expecting children to know what to do and seemingly satisfied if they keep busy. |
| 12. Skillful in directing pupils to evaluate their own work. | Failing to help pupils set up standards of their own. |
| 13. Aware of children's physical and emotional needs as well as their educational needs. | Unaware of all else except accomplishment of academic work. |
| 14. Interested in pupils as persons. | Interested only in each child's academic progress. |
| 15. Alert to the differences in individuals, recognizing abilities and limitations. | Little or no understanding or provision for individual variation or difference. ³ |

These fifteen practices might well apply in most high school classroom situations. We recognize, however, that the teacher's behavior in a gym class of one hundred students might be very different from that in an advanced literature class of twelve. Also, behavior varies markedly according to the nature of the students. At the beginning of the school year students in one class may be industrious and well behaved and exercise considerable self-control; in another the opposite may hold. More positive control is needed in the latter.

AREAS OF INSTRUCTION RELATED TO DEMOCRATIC IDEALS

Major emphasis has been directed toward clarifying the role of the classroom teacher in the foregoing discussion of democratic ideals and of teacher-pupil relations because democracy is a way of life, and the methods employed by the teacher, more than any organized body of facts and information, are important in helping students learn how to live democratically. Certain areas of subject matter or topics which frequently are not given sufficient attention in the secondary program and

³ Bernice Baxter, *Teacher-Pupil Relationships*, New York, The Macmillan Company, 1945, pp. 34-35.

which help students to build more mature understandings of our way of life include forms of government, intercultural education, problems in community life, and the role of education in democracy.

Forms of Government. Studying forms of government such as communism, dictatorship, and democracy helps students understand the ideals underlying each, how government functions are carried out, the methods employed by the leaders or rulers, the duties and responsibilities of the citizens, and the way of life under the various types. Although considerable criticism has been directed against instruction in high schools concerning communism in the postwar years, in some communities school officials and teachers have laid the basis for including it through discussion with parents and other persons in the community. It appears plausible that adolescents will value democracy more highly when they recognize that in other forms of government the individual is not respected, groups of individuals who are in the minority are liquidated, force and police systems employed widely by government destroy the individual citizen's liberties, and there is little self-determination of life goals.

Intercultural Education. Intercultural education is concerned with helping students understand the differences and likenesses of individuals who comprise our society and the world. It is concerned with helping youth discover the needs and aspirations which are common to all groups of people, differences among individuals and groups which may be capitalized upon to improve the quality of human life, and undesirable differences among individuals which may be controlled or eliminated.

In our own country we have not yet dealt with the problem of minority groups adequately. We do not know how to deal with some minority groups which exercise their rights—freedom of press, freedom of speech, freedom of assembly—but do not accept responsibility for their actions. At times in various communities discriminatory actions by the majority are directed against minorities—racial, nationality, religious, and political—simply because the groups are in the minority, not because they violate rules and regulations or have needs and aspirations which differ markedly from those of the majority. Understanding how individuals and groups within a community, state, or nation are

alike, discovering and discussing differences which exist, and applying the democratic ideals to solving problems which groups meet should help students and teachers learn how to get along with one another more effectively in school and in the community.

As indicated in the previous discussion of technological progress and faith in the future, we are all aware that the people of our country and of the world are becoming increasingly interdependent. We need to know much more about the cultural patterns of the Oriental people, the Arabs, the South Americans, etc., if at some time in the future ways and means to lasting peace are to be found. The study of geography and history helps in building such understandings; what is proposed in this discussion is that particular attention be given to specific study of the cultural patterns of the people in the locality, state, nation, and world in appropriate places throughout the junior and senior high school years.

Problems in Community Life. Democracy is a way of life and not an end or goal to be reached at some time in the distant future. We find that our concepts concerning democratic living undergo modification and refinement and that political, social, and economic conditions are changing continuously. The net result is that each community is constantly meeting new problems which demand solutions and for which no previous solutions are completely satisfactory. These problems are encountered in the school community, the locality, the state, the nation, and in international relations. So far as the school program is concerned, the most effective learning probably starts with those problems which when solved at a verbal level can be put into practice at the action level.

In the school community recurrent problems are discovered which are related to the organization and management of the student council or student government; the election of class officers; the formulation of guides to conduct at school events such as parties, dances, or athletic contests; the formulation of guides to conduct in the school buildings; and the care of property. We should carry out democratic behavior at the action level related to these problems rather than teaching ideals as abstractions. Is it not somewhat unrealistic, for example, to teach students respect for property of others as an abstract ideal and at the

same time to set up rules whereby the student who has not secured his locker properly is held responsible for any theft which might occur? If we cannot educate students to the point where they will not steal from unlocked classmates' lockers, how can we expect them to respect property rights of unknown persons outside the school?

There are many problems existing in most localities, small and large, which might serve as important learning areas in classes throughout the secondary school years: (1) How effective are our traffic courts and our program of traffic education? (2) How can infractions of laws by minors be handled more adequately? (3) How can the school and community improve the supervised recreational program? (4) How can the health of the community be protected more adequately? These are only a few of the problems which may be appropriate for consideration in a number of different high school classes. Problems related to governmental conditions in the state and nation are equally numerous.

The Role of Education in Democracy. The role of education in democracy might be considered a problem area in community life but it is not included as such because it deserves special attention. The success of democracies is dependent upon all citizens' being able to govern themselves and to contribute to governing others. To contribute to the proper functioning of organized government, some persons must accept political offices, others must help formulate issues and plans, and many must vote. The person who votes intelligently must be aware of issues, gather facts and information concerning parties and candidates, appraise governmental policies and the role of particular individuals in setting those policies, recognize propaganda, and evaluate a great deal of spoken and printed information in relation to his own concepts of what constitutes good government. These are skills which require a great deal of learning, and our public schools should help boys and girls develop the skills; also, students should learn how important public education is to the efficient operation of democratic government.

No doubt you find it interesting to note the kind of public relations program which large cities employ to gain support for public education. The program is directed toward adults, most of whom completed eight years of school and many of whom finished the twelfth grade in a public high school. Is it not surprising to discover that so many adults

in the community are unaware of how important the school is to life in the local community, or of how important public education is to life in the state and nation? Undoubtedly, a large number of persons have completed high school without having discovered the close relationship between a good quality of education and democratic life; others have encountered disappointments and failures in their schooling; still others have gone to private schools and give their allegiance and support thereto. In light of the many difficulties small and large school systems are having in securing support for an adequate program of secondary education, it appears imperative that the secondary schools seriously consider organizing at various grade levels specific learning activities wherein students become more familiar with the role of education in American life.

SPECIAL PROVISIONS IN THE SCHOOL PROGRAM

Generally, the regular high school program meets the needs of students (1) whose parents have sufficient resources to provide for their physical needs connected with going to high school, (2) who have slightly below average to superior mental abilities, (3) who have made fairly satisfactory to excellent progress in the elementary grades, (4) who are relatively free from physical and emotional handicaps, and (5) who have developed socially acceptable motives and aspirations. These categories exclude a considerable number of youth who cannot be taught effectively in the regular classrooms without excessive work on the part of the teacher or retarding the progress of the more normal group. What kinds of special services should be made available for these youth?

Students who have insufficient funds for high school education need direct financial assistance or part-time employment. Students with very low mental abilities and a history of repeated retardation, failure, or poor work in the elementary school need special instruction in the so-called skill subjects—reading, writing, and arithmetic; they need to be taught how to care for their maturing bodies; they need to be taught a useful occupation whereby they may secure a livelihood; and they need to learn how to get along with others. The physically handicapped, where the handicap is severe, need individual instruction. Emo-

tionally upset adolescents and those who have already learned antisocial motives and aspirations need help from a skilled counselor. In some cases the school may attempt to help the adolescent through improving the home condition.

Students fitting into these categories constitute a real problem for the school which has insufficient funds to provide these services. The ideal of acceptance of the individual and the goal of making secondary education of worth to all children of school age require that special services be provided for youth who cannot be accommodated adequately in the regular school program.

DEMOCRATIC MANAGEMENT OF THE WHOLE SCHOOL

The whole school is a social unit. Various individuals have duties and responsibilities which should be carried out with the intent of securing a good education for youth. The students, the teachers, the counselors, the school nurse, the custodians, the superintendent, and the principal should practice democratic methods of association and participation in the solution of problems. For the major part, problems related to the school employees' economic welfare, making the policies for the school, organizing the instructional program, and carrying out the program should be solved jointly by the administration and the teachers or teacher representatives. In setting up a program of extracurricular activities, students and perhaps parents should be brought into the planning. In keeping the school building clean and neat, all persons who benefit or are interested in such action—the administrator, teachers, school nurse, custodian, and students—might formulate the policies to be carried out within the school. Parents and others in the community should be brought in to formulate policies related to financing the program.

The administrator, though responsible for the execution of policies and the general management of the school, may exercise democratic leadership in his relations with other school employees and students as the teacher does in the classroom. How the adults in the school conduct their relations and solve their problems vitally affects the conduct and learning of students in the school. Fowlkes summarizes relationships in the whole school thus:

Administrators, just as much as teachers, are obligated to be democratic. Although often not so recognized, the positions of those designated as administrators are highly analogous to or even identical with the positions of classroom teachers. All professional educators are partners. . . . Every professional worker on a school staff but especially teachers should constantly try to make the school a truly democratic institution. Since it is well known that learning corresponds with doing, unless the school operates democratically its graduates will not prove to be democratic. . . . Boys and girls, as well as teachers, should participate in the formulation of school policies, particularly with respect to matters of classroom organization and operation.⁴

STUDYING COMMUNITY FORCES WHICH IMPLEMENT DEMOCRATIC IDEALS

Every community has its own way of life. The teacher who would learn the ideals which guide behavior of youth in the community must study the particular community in which these youth live. Also, the teacher new in a community can more effectively decide how best to fit into the community pattern of life by finding out what it is like. Usually when a teacher goes into the community with the sincere purpose of analyzing it in order to become a more effective teacher and citizen, parents, civic leaders, and others interested in education respond with acceptance and extend an invitation to the teacher to participate in community affairs and organizations. Six methods are outlined for studying aspects of community life related to the democratic ideals and processes discussed previously.

1. Find the number of students who were enrolled in a particular school at the beginning of a year but who did not complete it. List the first ten dropouts who remained in the community. Present these names to the school social worker, the principal, or the counselor. Go to the homes with one of these persons to discover both the parents' and the student's reasons for the dropping out. Make a chart with student's name, parents' reasons for his quitting, student's reasons, and what the youth is presently doing. In case dropouts have already been investigated by an official of the school, request such official to allow you to

⁴ John Guy Fowlkes, "Teachers for Tomorrow," in M. H. Willing, et al., *Schools and Our Democratic Society*, New York, Harper & Brothers, 1951, pp. 406, 413.

examine the records. Decide which of the five ideals is not being practiced in the home, school, or community and how the school program or school-community relations might be improved to lower the dropout rate.

2. Usually communities have public and private social agencies which provide various forms of assistance for needy youth and recreational facilities for all youth. Frequently, all of these are organized into one central group with officers and office space. Go to such central agency or to the individual agencies to discover what type of assistance is provided by each—for example, clothing, spectacles, school supplies, part-time work, psychiatric treatment, recreational opportunity, and the like. Make a chart of those which might be of most service to high school students; include name of organization, location, phone number, type of assistance provided, and to whom available. Identify the ideal or ideals which these organizations are attempting to implement through positive action.

3. Go to the juvenile court or other court which handles cases of youth under eighteen years of age. Get the sex, age, parental status, race and nationality, home location, type of offense, and action taken for all youth brought into the court within the past week or year, depending on the number of cases. Plot home location of offenses on a city map to discover which part of the city contributed most cases. Visit such areas to discover reasons. Now go to the high school which these youth would ordinarily attend. Find each youth's record, including grades, attendance, and behavior. (Frequently part of the school record is available from the juvenile court.) An interview with the principal, counselor, or teacher would yield further insight into the problem. Identify the social units—home, neighborhood, school, or governmental agencies—wherein ideals and democratic processes have been violated, which violation led to the delinquent behavior.

4. To discover the major private clubs and organizations which exist within the community, check newspaper reports of social activities or interview the news editor of a local newspaper. After obtaining this information, find the qualifications for membership and who participates in such groups as country clubs, Rotary, Kiwanis, women's service organizations, community centers, PTA, and the like. Do any clubs

draw exclusively from particular residential areas, from the professions, from businessmen, from labor groups, or from specific religious or nationality groups? Specifically, which ideals are implemented by these organizations? Are any violated?

5. Go to the library and find the national policies of labor unions toward the school and qualifications for membership in labor unions. Interview union members or officials of the major labor unions to discover answers to these questions: What is national and local policy with respect to high school education? Nationally and locally, do any requirements exclude membership in the union on the basis of race, nationality, or other criteria? Which ideals are implemented in the practices of organized labor unions?

6. Consult the radio guide to discover dramatization-type programs of major networks. Make a listening record of each network's programs from 5:30 P.M. to 10:00 P.M. Which of these programs dramatize the democratic ideals? While listening to the radio programs make a close analysis of the comic sections of the newspaper. Which of these are in harmony with the ideals? Are any opposed? Examine the editorial section of the newspaper. What attitudes are expressed by the columnists and by other persons in letters to the editor? Make a scrapbook of those editorials and comments concerned with education in the community. Analyze their influence on formulating opinion in harmony with the ideals and democratic processes previously described.

Each of these projects requires a considerable amount of time. Many others might be undertaken. A group of students or teachers working together might investigate all of them or break any one into separate parts as a total group activity to determine those forces which impede or contribute to the ideals of democratic living.

SUMMARY

The goals of secondary education and of democratic living include assisting youth to build understandings, skills, and values whereby they associate harmoniously. The methods and materials of teaching must be selected and organized to achieve democratic ideals and practices if the secondary school is to contribute its potential for improving human associations.

Professional teachers employ five democratic ideals as guides to their behavior. First, they respect the unique individuality of each youth by accepting him as he comes to school and by organizing classroom activities in which each youth participates with others, develops a feeling of worth-while status, and feels secure in the classroom social group. Second, student intelligence rather than force by the teacher becomes the means for solution of problems. Third, students learn to coöperate for their mutual welfare. Fourth, each student is provided opportunity to choose a course of action from among several alternatives proposed by the teacher and learns to accept responsibility for his actions. Fifth, each student develops faith in progress through the concrete experiences provided in the school and classroom, where he sees that human associations are improved and wherein he develops the skills needed to direct his own behavior intelligently.

The teacher who is sincerely interested in becoming an effective citizen and leader of youth investigates aspects of school-community relations which are crucial for the survival and progress of democratic living. Knowledge of the community forces which produce the behaviors of youth attending school is requisite for assisting them to build a better community.

QUESTIONS AND ACTIVITIES

1. Appraise the adequacy of the five ideals upon which democratic human relations are built. Are they sound? Are additions needed?
2. What does respect for individuality mean when applied to teacher-student relations in the classroom?
3. In your home or school community, cite examples where intelligence is used in solution of problems. Cite examples where force rules.
4. Drawing from your high school or college experiences, cite examples of domination or integration similar to those listed in Anderson's study.
5. To what extent can a teacher exercise democratic leadership in the classroom as described by Lippitt and White?
6. Discuss areas of life where coöperation more than competition is followed and others in which competition more than coöperation rules. From what kind of activity, competitive or coöperative, do you secure most personal satisfaction?

7. Define freedom. To what extent are you a free individual?
8. Identify classroom practices which tend to reduce opportunity for students to grow in self-direction and others which encourage such growth.
9. Can a larger society or a social group within it such as the home or school develop high morale without faith in progress? Specifically, how does a teacher help students develop faith in the future?
10. What services and activities related to understanding and practicing democracy should be included in the high school program? In a college program which prepares teachers?
11. Arrange the six procedures for studying school-community relations and ideals in the order in which you think a high school or college class might carry them out most effectively.
12. Describe community influences upon the ideals of high school youth which need to be examined continuously by school-community groups.

REFERENCES

- Bode, Boyd H., *Democracy as a Way of Life*, New York, The Macmillan Company, 1943.
- Briggs, Thomas H., et al., *Secondary Education*, New York, The Macmillan Company, rev. ed., 1950, chap. 4.
- Caswell, Hollis (ed.), *The American High School*, New York, Harper & Brothers, 1946, chap. 4.
- Counts, George S., *Education and the Promise of America*, New York, The Macmillan Company, 1945.
- Department of Supervision and Curriculum Development, *Group Planning in Education*, Washington, National Education Association, 1945.
- Dewey, John, *Reconstruction in Philosophy*, Boston, Beacon Press, 1948.
- Edwards, Newton, and Richey, Herman G., *The School in the American Social Order*, Boston, Houghton Mifflin Company, 1947, chaps. 11, 12, 13, 14, 15, 16.
- Frasier, George W., *An Introduction to the Study of Education*, New York, Harper & Brothers, 1950, chap. 3.
- Hollingshead, August, *Elmtown's Youth; the Impact of Social Classes on Adolescents*, New York, John Wiley and Sons, 1949.
- Kilpatrick, William H., *Modern Education: Its Proper Work*, New York, Hinds, Hayden and Eldredge, Inc., 1949.
- National Council for the Social Studies, *Democratic Human Relations, Sixteenth Yearbook*, Washington, National Education Association, 1945.

- National Society for the Study of Education, *Learning and Instruction, Forty-Ninth Yearbook*, Chicago, University of Chicago Press, 1950, Part I, chap. 6.
- Rugg, Harold, *Foundations for American Education*, Yonkers, World Book Company, chaps. 8, 9, 10, 11, 12.
- Stiles, Lindley J., and Dorsey, Mattie F., *Democratic Teaching in Secondary Schools*, Philadelphia, J. B. Lippincott Company, 1950, chaps. 15, 16.
- Van Til, William, *Economic Roads for American Democracy*, New York, McGraw-Hill Book Company, 1947.
- Warner, W. Lloyd, Havighurst, Robert J., and Loeb, Martin B., *Who Shall Be Educated?* New York, Harper & Brothers, 1944.
- Willing, M. H., et al., *Schools and Our Democratic Society*, New York; Harper & Brothers, 1951, chaps. 4, 5, 14.

The Nature of Secondary Curriculum

In Chapter 1 the general goals of secondary education were examined. One group of goals, stated as Ten Imperative Educational Needs of Youth, was first formulated by the Educational Policies Commission of the National Education Association. The National Association of Secondary School Principals studied practices related to achieving these goals in some two hundred different high schools and further clarified them. As previously indicated, these goals appear to be adequate for guiding the general course of secondary education in American life. These goals come to life in a secondary school as we are able to make them relate more specifically to our own situations and as we organize and direct learning activities to meet the educational needs of all youth.

All learning activities which are organized by the school and over which the school has control constitute its curriculum. Krug states a definition of curriculum and a purpose for studying curriculum thus:

Although education goes on in all aspects of human living, most societies have set up for its specific application the institutions we call schools. These institutions use a variety of means to promote what the society considers desirable learnings. To the sum total of the means so employed we apply the term "curriculum." In other words, curriculum becomes the instrumentality by which the schools seek to translate our hopes for education into concrete reality. Working on the curriculum, then, shapes up as a matter of crucial importance not only for school teachers but for all who live in the society which sets up the school.¹

¹ Edward A. Krug, *Curriculum Planning*, New York, Harper & Brothers, 1950, p. 1.

Curriculum thus broadly conceived includes learning activities which are carried out in the usual pattern of high school subjects; extra or cocurricular activities such as athletics, dramatics, clubs, and social events; school-community projects like getting funds for the Community Chest or organizing and supervising recreational activities—a youth center, for example; and special services managed by the school, such as counseling, health, and library. In this frame of reference, curriculum means not only what is taught, or content of the school program, but also how teaching occurs, or method—the total means employed by the school to educate youth in a desirable way in achieving socially valid objectives.

Larger school units still maintain some separation of services for administrative purposes. Such separation is indicated by the titles and duties of persons: (1) The curriculum coördinator, consultant, or director is the person who assumes leadership in formulating the school's objectives, coördinating the pattern of school subjects and extracurricular activities, building courses of study, and organizing various aids to classroom instruction; (2) the subject supervisor or general supervisor works with teachers to improve instructional services related to a particular field of subject matter or to general problems which the teacher encounters; (3) the guidance director or coördinator of guidance services is the person who coördinates the special guidance facilities and counseling services; and (4) the health officer is the person in charge of health services in the school—immunization and vaccination, health inspections, physical examinations, etc. As you note from the titles and descriptions, the tendency is to differentiate according to content of instruction, methods of instruction, and special services. While such differentiation is useful for administrative purposes, modern educational philosophy and curriculum theory recognize that all of the means used to change behavior of students in a desirable manner constitute the curriculum and should be carefully organized and controlled so that students gain maximum values from engaging in any and all learning activities.

In this chapter major attention is focused upon the regular classroom program of instruction. Terminology related to curriculum and curriculum organization is first examined so that the discussion becomes

more meaningful. Then follows an analysis of course patterns and proposals, an examination of the role of the teacher in curriculum construction, and an outline of six methods for investigating curriculum organization and practices.

CURRICULUM TERMINOLOGY

One of the better ways to see the need for understanding curriculum terminology is to examine several college catalogues, including that of your college, along with the curriculum statements of several junior and senior high schools, including the one in which you teach or intend to teach. Another procedure is to read several recent magazine articles which treat modern problems related to the secondary curriculum. After completing such a study, try to explain to your colleagues any differences in the various curriculum practices which you have examined. In general, you will find that terms which originated prior to 1920 are quite clearly defined. Terminology originating in the period since then has become confused because so much experimentation has occurred. The discussion which follows may help you to clarify the most important terms currently in use.

The time spent by a group of students in one meeting of a class for instruction constitutes a *class period*. In the college program, the fifty minute class period is frequently employed. In some junior high schools, class periods may be forty minutes in length or shorter. In other junior high schools one class period may extend throughout the morning or the afternoon.

In the high schools a total of sixteen *year units of credit* is usually required for graduation. One year unit consists of meeting a class five days per week, in a class period of forty-five to sixty minutes, throughout the school year. Thus, if a student takes and successfully completes a class in English in his sophomore, junior, and senior year, he receives three units of credit toward graduation. If he takes a class in geometry which meets fifty minutes each day during one semester he receives one-half unit of credit in geometry.

In making out your college program for a quarter or semester, you examined a *schedule of classes* which listed all the classes offered and

the days, hours, meeting place, and perhaps name of instructor for each class. The high school schedule of classes is similarly organized.

A *separate or single subject* is a body of subject matter related to a specific grouping of concepts and processes. Thus, English composition, English literature, American literature, dramatics, journalism, speech, creative writing, and remedial reading are separate subjects in the broader field of the language arts.

The order in which classes or learning activities are organized at the various grade levels indicates *sequence* in the curriculum. In a curriculum organized along separate subject lines, sequence is indicated in a pattern of classes in arithmetic, algebra, geometry, and trigonometry offered in successive years or semesters. The breadth and inclusiveness of the classes and the learning activities therein are indications of the *scope* of the curriculum. Thus, when arithmetic, algebra, English composition, civics, general science, physical education, music, and art are the only classes offered in the ninth grade, the scope of the curriculum is shown by the learning activities which are undertaken in those classes.

The scope of the curriculum is fixed by what we consider worthwhile learnings for high school students. In turn, what is considered worth while is mainly a problem of philosophy and sociology: "What values in our democratic society should be achieved through instruction of high school students?" The sequence should be determined mainly by psychological considerations such as the characteristics of the adolescents in the various grades, the nature of the learning process, and the relative difficulty of materials. In many instances sequence is not determined by these psychological factors but by the logical organization of subject matter into separate courses—ancient history, medieval history, and United States history.

Course has several meanings and can be understood only in context. In high school you probably took a series of classes, not necessarily separate subjects, in a sequential order throughout the high school grades which compositely were called the college preparatory course. Other students had different objectives and may have taken specialized work: a home arts course, a fine arts course, a business course, or a scientific course. High schools frequently use "course" in this manner, but some call the special programs tracks or curricula.

Separate subjects from different fields—American literature and United States history, for instance—may be combined and studied simultaneously. In this case the separate subjects lose their identity and the class or course is called *correlated*.

A *broad-fields class or course* is one in which single subjects in an area such as the language arts, social studies, science, or fine arts are combined. Separate subjects taught as history, geography, economics, sociology, and political science are combined into a broad-fields class, social studies. Literature, composition, and speech are combined into a language arts class.

A class or course in which problems to be solved utilize subject matter from various fields is frequently called *integrated*. The totality of the learning activity, e.g., that involved in surveying the life of the local community, is the deciding factor in the selection of subject materials. Subject boundaries are disregarded in the integrated course; the emphasis is upon solution of problems and is not on the teaching of subjects as such.

The *core* usually means all the learnings required of everyone in the high school program. The core class at a given grade level includes the learnings required of all students in a particular grade, such as ninth or tenth. As many authors use "core," it does not mean single subjects which are required but instead refers to those learnings which are so fundamentally important that they are common to all students. These learnings are generally considered to be of the type which cannot be gained through the study of subject matter organized in a pattern of single subjects.

Frequently we find that the high school identifies its whole curriculum design or pattern by one or other of the above designations. If the classes required of all students for graduation are organized as single subjects or emphasize the imparting of subject matter as the chief function of instruction, the curriculum pattern is called a *subject-centered curriculum*. If the required classes are organized into broad fields, it becomes a *broad-fields curriculum*. If the required classes depart from subject lines and include those learnings which are fundamentally important for all students, the curriculum may be called a *core curriculum*. Regardless of what the required classes are called or how they are organized, in most high schools some classes in single subjects or

broad fields are included in the curriculum so that students may specialize in some track such as fine arts, industrial arts, etc., along with completing the required classes or constants.

It is when a whole curriculum is designated by terms like these that real difficulty is encountered in understanding what the curriculum is about. The term "child-centered curriculum" is used to indicate a curriculum pattern in which the attempt is made to include those learnings which are initiated by discovering the expressed interests of the students as the basis for deciding content and method. The experience curriculum tends to place less emphasis upon expressed interest and more on learning activities which keep the students physically and mentally engaged in work on problems which they help to originate and define. Some schools now call their whole program a life adjustment curriculum. Some schools now call that part of the program required of all students the general education curriculum. One common feature of all these later developments is that, regardless of how the terms are used, each originally represented an attempt to break down the single-subject pattern of curriculum organization in order to make learning activities of more value to students.

When we examine the first definition of curriculum as stated in this chapter, "all learning activities organized by the school and over which the school has control," we recognize that it is unwise to designate a whole curriculum design by the philosophy underlying the goals to be sought, the teaching methods employed, or the organization of classes in that part of the high school program required of all students. Equally important, we must understand curriculum terminology and organizational procedures because within the already established curricular design of a school the beginning teacher attempts to organize learning activities which will achieve the general goals of secondary education and the more specific objectives of classroom instruction. We now survey some of the more important course patterns and proposals.

COURSE PATTERNS AND PROPOSALS

Many patterns in course organization exist among the various junior and senior high schools today. In general, a certain number of specified classes are required of all students for graduation. Each student also selects a particular track or course, such as the home arts, fine arts, or

commercial, and must then take certain classes to complete it. Besides this, the student may take certain limited electives—machine operation or office practice, for example, if he is pursuing the commercial course; further, he may take free electives not directly connected with his course. Students may take part in school activities like music or athletic programs, receive counseling and health services, engage in student government, participate in a school-community project, or actually work in a community establishment and receive credit toward graduation. This has not always been the case in secondary schools, as we shall see in the patterns and proposals which follow.

THE BOSTON LATIN GRAMMAR SCHOOL

The traditional European secondary school was transferred to America in 1635 and had one major purpose—to prepare a small minority of youth for college work. The curriculum consisted primarily of instruction in Latin with smaller amounts of Greek and religion. At that time Latin was used by the ministry, public magistrates, teachers of Latin, and others. Harvard College, founded in 1636, set the pattern for college domination of secondary curriculum. In 1642 Harvard admission requirements included reading Cicero at sight, speaking Latin poetry and prose, and conjugation of Greek verbs. Other colleges established after Harvard followed a similar pattern of entrance requirements. Latin schools established after 1635 set up curricula with heavy emphasis on Latin and Greek, for these were two inescapable requirements for admission to college.

THE ACADEMY

The Latin grammar schools continued to dominate secondary education without serious challenge until the middle of the eighteenth century. In 1753 Franklin's Academy was chartered in Pennsylvania. Benjamin Franklin proposed that more practical curricula be designed for youth and be available to a larger number of them. His subject proposals, many of which were not followed, included writing, drawing, English grammar, composition, literature, arithmetic, geometry, astronomy, history, science, agriculture, gardening, and mechanics. No religious instruction was proposed.

Other academies were founded after this, some privately endowed,

some supported by religious groups, and others public supported. The major accomplishments of the academy were freeing the curriculum from religious subjects, opening secondary education to girls, and providing more practical courses for more youth. The academy expanded in New England and the middle Atlantic states until 1840. College and university entrance requirements came to dominate curricula; for academy students, too, came from relatively wealthy homes and usually went to college after academy education.

THE ENGLISH HIGH SCHOOL OF BOSTON

The Latin school and the academy did not meet the needs of the people who could not afford to pay fees or dormitory expenses for their children in secondary schools. The middle class, whose children were provided free elementary school education, wanted public-supported secondary education. The English High School of Boston, established in 1821, was the first attempt in this direction. It was a three-year high school designed for boys twelve years or older who were not intending to go to college. The curriculum included no foreign language or religion. English composition, geography, arithmetic, algebra, geometry, surveying, navigation, United States history, and natural and political philosophy were given prominence in the curriculum.

In 1827 Massachusetts required each town of five hundred or more families to establish such a school. Thus in the New England states, Latin schools and academies, which usually required fees from students in attendance; and English high schools, usually not requiring fees but not attended in large numbers, existed together as secondary schools. It remained for the frontier group—the area we now call the north central states—to establish the free public high school intended for all youth of school age.

THE FREE PUBLIC HIGH SCHOOL

The idea of creating one secondary school, public-supported, for all youth was implemented in Michigan in the Kalamazoo case in 1874. The supreme court of Michigan ruled that school boards could levy and collect taxes for the support of secondary schools. This precedent

was widely followed in the surrounding states—Wisconsin, Illinois, and Indiana. States coming into the Union after this date also provided for free secondary schools. This event marked the end of establishing Latin schools and academies. By 1900 the free public high school was accepted as a continuation of the elementary school.

The new high schools drew upon established institutions for curricular design. College and university officials continued to press for certain kinds of abilities and performance and specified amounts of credit in Latin, mathematics, and other subjects.

PROPOSALS OF NATIONAL COMMITTEES, 1895–1911

The Committee on College Entrance Requirements began its work in 1895 and reported in 1899. The committee strongly approved of Latin, Greek, French, German, English, history, civics, economics, geography, biology, chemistry, and mathematics as high school subjects. In general, it approved the Committee of Ten's Report of 1893, in which four types of model secondary courses were recommended as college preparatory: (1) the classical course, which included two ancient and one modern foreign language; (2) the English classical, which included one ancient and one modern foreign language; (3) the modern language, which included two modern languages; and (4) the scientific, which included one foreign language. Both the Committee of Ten and the Committee on College Entrance Requirements included more members from college and university staffs than from secondary schools. This make-up probably accounts for the emphasis on the college-preparatory function of secondary education at the expense of high school education as terminal education for those students who would not go to college.

To clarify the role of the high school in preparing for college entrance, the Committee on College Entrance Requirements recommended that each student's high school record show that he had completed four units in a foreign language, two units in English, two units in mathematics, one unit in history, and one unit in science. At the same time the committee recommended that four hours of class attendance per week throughout the school year be counted as a unit. In 1906 the Carnegie Foundation for the Advancement of Teaching

proposed that meeting a class for five periods per week throughout the school year constitute one unit.

The recommendations of the Committee on Entrance Requirements concerning allocation of units and control of secondary curricula by college admission requirements were reinforced by the decision of the Committee of Nine on the Articulation of High School and College. In 1911 this committee proposed that the high school program should include fifteen units, of which three should be in English, one in social science, one in natural science. Further, all high schools should include two majors other than English of three units each and one minor of two units. The two majors in addition to English should be selected from (1) Latin or a modern language, (2) mathematics, (3) social science, or (4) natural science. The requirements for graduation should not specify more than two units of mathematics or two units of foreign language. Eleven of the fifteen units should be drawn from the five subjects specified for majors and the other four units should be left as a margin to be used for additional academic work like mechanical arts, household science, commercial work, and any other kind of work that the best interests of the student appear to require. Also, physical education should be required but with no credit toward graduation.

Generally, the recommendations of these committees were followed widely in the secondary schools of that time, continued in strength throughout the 1920's, and are still found in some high schools today. Here is a sample transcript from a four-year high school issued in 1931:

| | | | |
|-----------------------|----------|--------------------|----------|
| English | 4 units | Geography | 1½ units |
| Latin | 3 units | Biology | 1 unit |
| European history | 1 unit | Physical education | ½ unit |
| American history | 1 unit | Health | ½ unit |
| Economics | ½ unit | Art | ½ unit |
| Civics | ½ unit | Music | ½ unit |
| Commercial arithmetic | 1 unit | | |
| Algebra | 1½ units | | |
| Plane geometry | 1 unit | | |

You note that the four majors completed—English, foreign language, social studies, and mathematics—and the minor, science, were the five

proposed as majors in 1911. You also note that all subjects except the last four were included in the 1899 proposals.

In the school from which the transcript was obtained, every ninth-grade student was required to take Latin and algebra. All students were required to complete at least sixteen units, of which not more than four might be elected. The school was a small consolidated one in a rural area of southern Indiana. Less than one-third of the students who entered the school were graduated. Considerably less than one-half who finished the eighth grade started in the ninth. During 1927-31 there were no classes in agriculture, business, industrial arts, physics, chemistry, dramatics, speech, orchestra, or band.

ESTABLISHMENT OF JUNIOR HIGH SCHOOL CURRICULUM

The junior high school movement began in the early 1900's. In 1908-09, the 6-3-3 plan replaced the 8-4 plan in Berkeley, California. The establishment of the junior high schools was strongly influenced by the Committee on Correlation of Studies, which started its work in 1893, and by the Committee on Economy of Time, 1903-13. These groups favored putting some subjects usually taught in the four-year high school into the seventh and eighth grades and arranging instruction in these grades on a departmentalized basis. At that time it was thought that setting up instruction in the seventh and eighth grades according to the high school plan and in a separate school would save time, provide a more suitable school environment for early adolescents, promote better scholarship, improve discipline, secure better provisions for helping individual students, and lead to more rapid advancement of students in learning. These values are still claimed for the junior high school and are probably valid when instruction and curriculum design are organized to achieve them.

The proposals of the committees just outlined strongly influenced choice of subjects to be taught in the junior high schools as well as length of period and method of counting units. Many subjects previously taught in the ninth grade of the four-year high school were dropped downward into the seventh and eighth grades while some of those from the eleventh and twelfth were brought down into the ninth.

Junior High School 1951-52 Schedule

| Room | Teacher | HR & Duty 8:35 | Period 1 8:45 | Period 2 9:40 | Period 3 10:35 | Period 4 11:30 | Period 5 12:25 | Period 6 1:20 | Period 7 2:15 |
|----------|---------------------|--------------------------------|---|---|--|---|--------------------------------------|--|---|
| 5 | Estel Bashor | 9 th HR | 9 SS | | 9 SS | Noon Hour | 9 SS | 9 SS | |
| 20 | Helen Beard | Assembly Coordinator | 9 Girls Glee M-W-F 9 Boys Glee T-Th | 8 Girls Glee T-Th 9 Girls Glee M-W-F | 7:15-8 Girls Glee T-Th 7:15-8 Boys Glee M-W | 7:15-8 Girls Glee T-Th Noon Hour M-W | 8 Girls Glee M-W Noon Hour T-Th-F | 7:15-8 Girls Glee W-F 7:15-8 Boys Glee T-Th-F | 9 SS |
| 2 | Lyle Beaver | | | | Orch M-W-F Beginners Orch T-Th | | | 7 th Science R 213 | 8 Boys Glee M-W |
| | Earle Boardman | | | | 8 Math | Noon Hour | | | |
| 1 | Nellie Bowman | | | | 9 English | Noon Hour | 9 Algebra | 8 Math | 9 Algebra |
| 114 | Beverly Brewer | 9 th HR | 8 Math ^a | 7 th English | 9 English | Noon Hour | 9 English | 7 th English | 7 th English |
| 104 | Grace Bruckner | Assembly 7 th HR | 7 th English ^a | 7 th English | 7:15-8 Skills | 7:15-8 Skills | Noon Hour | 7 th English | 7:15-8 Skills |
| 2 | Laurel Burley | 7 th HR | 7 th Math | 7 th Math | 9 Math | 7 th Math | Noon Hour | | 9 Math |
| Woodshop | Clarence Byrd | | | | | | Noon Hour | | |
| 102 | Anna Marie Campbell | 8 th HR R 112 | 9 Woodshop 8 English ^b R 114 | 9 Woodshop 8 SS R 113 | 7:15-8 Woodshop | 7:15-8 Woodshop | Noon Hour 8 English R 104 | 9 Woodshop Counseling | 7:15-8 Woodshop HR Planning R 102 |
| 204 | Irma Collins | 9 th HR | 9 Typing | 9 Typing | Noon Hour | Noon Activities | 9 Typing | 9 Typing | 9 Typing |
| 200 | Warren Cross | 8 th HR | 8 Science ^b | 8 Science | 9 Typing | Noon Hour | 9 Typing | 7 th Math | 7 th Math |
| 23 | Clarice Davis | 7 th HR | 7 th SS | 7 th English | 8 SS | Noon Hour | Noon Social M-W Girls PE T-Th-F | 7 th Math | 7 th SS |
| 102 | Marvin Dillon | 9 th HR R 107 | Counseling | Testing | 8 English R 106 | Noon Hour | Spanish R 106 | Spanish R 106 | HR Planning |
| 205 | Warren Donahue | 7 th HR | 7 th Math | | 8 Math | 7 th Math | Noon Hour | 8 Math | 8 Math |
| 25 | JoAnna Elgin | 8 th HR | 8 SS ^b | 9 SS ^c | 9 SS | Noon Hour | 8 SS | 8 SS | |
| 3 | Natalie Erxleben | 8 th HR | 8 Math | 8 Math | 7:15-8 Skills | Noon Hour | Noon Hour | 8 Math | 8 Math |
| | Earl Faulkner | | | | | | | | |
| 210 | Charles Holmes | 7 th HR | 7 th Science | 7 th Science | | 7:15-8 Skills ^a | Noon Hour | 8 Math Beginners Band T-Th Band II M-W-F Band Groups T-Th | 7:15-8 Skills Band I M-W-F Band Groups T-Th |

| 26 | Aubrey Lafoy | 7 th HR | 7 th SS | 8 th SS | 8 th SS | Noon Hour | 8 th SS | 7 th SS ^a |
|--------------|---------------------|--------------------------|-------------------------|---|--|---|---|---|
| 202 | Jack Lindblom | | 9 Crafts | 8-9 Boys Craft | 8 Crafts | Noon Hour | 7 th Math ^a R 210 | 8 Crafts |
| 21 | Gertrude Lyons | 8 th HR | 9 Clothing | 9 Clothing | 8 Clothing | Noon Hour | | 8 Clothing |
| Gym | James Miller | | 9 Boys PE M-W-F | 9 Boys PE T-Th ^c 8 Boys PE M-W-F ^b | 7 th -8 th Boys PE Daily | 7 th -8 th Boys PE Daily | | 8-9 Boys PE Daily |
| 22 | Ruth Muldoon | 7 th HR R 213 | 9 Foods | 9 Foods | 7 th -8 th Foods | Noon Hour | 9 Foods | 7 th -8 th Foods |
| 4 | Paul Nicholson | 9 th HR R 20 | | 7 th Math | 9 Algebra | Noon Hour | 9 Math | 9 Math |
| Metal Shop | Donald North | | 9 Metal Shop | 9 Metal Shop | 8 Metal Shop | Noon Hour | 9 Metal Shop | 8 Metal Shop |
| 105 | Margaret Paul | 8 th HR | 8 English | 8 English | 7 th -8 th Skills | Noon Hour | 8 English | 7 th -8 th Skills |
| 201 | Florence Phillips | 8 th HR | School Service | 8-9 Art | 8 Art | Noon Hour | 9 Art | 8 Art |
| 213 | William Savage | | 7 th Science | 7 th Science | 7 th Science | Noon Hour | 7 Boys PE Daily | 8-9 Boys PE Daily |
| Li- brary | Irene Sherk | | Library | 8-9 Library | 7 th -8 th Skills | Noon Hour | Library | 7 th -8 th Skills |
| 211 | Ben Slater | 9 th HR | 8 Science | | 9 Science | Noon Hour | 8 Science | 8 Science |
| 115 | Gertrude Steinhardt | 9 th HR | 9 English | 9 English ^c | Live Wire | Noon Hour | 9 English | 9 English |
| 102 | Doris Stricklan | 7 th HR R 4 | 7 th SS R 4 | Counseling | 7 th SS R 24 | Noon Hour | 7 th SS R 23 | HR Planning |
| Gym | Evelyn Timothy | | 9 Girls PE T-Th | 8 Girls PE M-W-F ^b 9 Girls PE T-Th ^c | 7 th -8 th PE Daily ^a | 7 th -8 th PE M-W-F Noon Social T-Th | 7 th -8 th Girls PE Daily | 8-9 Girls PE Daily |
| 106 | Dorothy Varra | 7 th HR | 7 th English | 7 th SS | Dramatics Auditorium | Noon Hour | Noon Hour | Dramatics |
| 212 | Margaret Weaver | 8 th HR | 8 Science | 7 th Science ^a | 8 Science | Noon Hour | 8 Science | 7 th Science |
| 24 | Louise Wagler | 8 th HR | 8 SS | 8 English | | Noon Hour | 9 SS | 9 SS |
| 113 | Mary Lois Wilson | 9 th HR | 9 English | 9 English | 9 English | Noon Hour | 8 English | 8 English |

^a indicates subjects required of all students in the seventh grade, daily, except Skills (remedial reading and arithmetic), which is not required of all, and PE, which is for three days.

^b indicates subjects required of all students in the eighth grade, daily, except PE, which is for three days.

^c indicates subjects required of all students in the ninth grade, daily, except PE, which is for two days.

Figure 3. Schedule of Classes, Meeker Junior High School, Greeley, Colorado.

Figure 3 shows the pattern of course organization for the first semester of 1951-1952 in Meeker Junior High School, Greeley, Colorado, which to some extent reflects the work of these committees.

ELECTIVES AND TRACKS IN THE SENIOR HIGH SCHOOL

By 1900 some electives had already found their way into the curriculum. Thereafter, as the number of youth in secondary schools greatly increased and as our society changed rapidly from agrarian to urban, the number of elective subjects grew rapidly, especially in the larger schools which could employ sufficient teachers and secure necessary spaces and supplies for the home arts, fine arts, industrial arts, and business courses. Separate subjects were first added and soon a group of related subjects were included to form a new track. Thus, a student might take the constant or required classes and another group of classes in the newly organized tracks. Special tracks and electives became so common in the large schools that boys and girls faced a real problem in deciding which programs and classes to pursue. Some youth tended to specialize heavily in certain elective areas or to scatter their classes so widely that there was little relationship among the subjects other than the constants. The required classes tended to build individual competences rather than promote common learnings significantly related to democratic living.

Another expansion of curriculum in the first part of the twentieth century was that of extracurricular activities. At first, the attempt to incorporate learning activities more directly related to students' interests came in the form of clubs and other organized groups which met outside regularly scheduled class periods. These were extra because no credit was given toward graduation and no class periods during the regular day were given to them. When the value of these activities became sufficiently clear, the schools began to schedule them during regular school hours and to give credit for them. At present the term "cocurricular" is coming to replace "extracurricular."

EXPERIMENTATION SINCE 1918

The Cardinal Principles of Secondary Education as stated in 1918 by the Commission on the Reorganization of Secondary Education did much to focus attention of educators on the problem of designing a

curriculum pattern, at least that part required of all students, which would achieve the objectives of health, command of fundamental processes, worthy home membership, vocation, civic education, worthy use of leisure, and ethical character. In the period following 1918 till the present we find both junior and senior high schools experimenting with curriculum design and practice.

One comprehensive study which gave much impetus to experimentation was the Eight-Year Study which began in 1933. It was sponsored by the Progressive Education Association and was directed by Wilford Aikin. Thirty secondary schools which participated in the study included private and public, large and small, and traditional and progressive. Some two hundred of the nation's colleges and universities agreed to waive all entrance requirements for graduates from these participating schools and to admit them on the principals' recommendations.

Curriculum consultants worked with the staff of the participating schools to rebuild their curricula within a framework of these general objectives: greater mastery and continuity of learning, a clearer understanding of contemporary problems of society, the development of a sense of responsibility, higher release of creative energies, more freedom of choice for students and teachers, and more emphasis on counseling of students. Broad-fields, correlated, integrated, and problem-type approaches to curriculum offerings were found among the various schools as they reorganized their patterns. In the study those schools which most nearly followed the "traditional" program of separate subjects and college preparatory classes were called the "least progressive" and those which changed most from the traditional were called the "most progressive."

An evaluation staff under the direction of Ralph Tyler devised unique instruments and procedures to evaluate the outcomes of the experiment.

The first graduates of the participating schools started to college in 1936. A follow-up study of the graduates was undertaken to discover how they achieved in college. In this part of the study, 1475 graduates from the participating schools were paired with 1475 graduates from "traditional" high schools. The pairs were equated in IQ score, scholastic aptitude, age, sex, and socioeconomic backgrounds. Some of the more important conclusions reported by the researchers follow:

In comparison of 1475 matched pairs, the College Follow-up Staff found that the graduates of the thirty schools:

1. earned a slightly higher total grade average;
2. earned higher grade averages in all subject fields except foreign language;
3. specialized in the same academic fields as did the comparison students;
4. did not differ from the comparison group in the number of times they were placed on probation;
5. received slightly more academic honors in each year;
6. were more often judged to possess a high degree of intellectual curiosity and drive;
7. were more often judged to be precise, systematic, and objective in their thinking;
8. were more often judged to have developed clear or well-formulated ideas concerning the meaning of education—especially in the first two years of college;
9. more often demonstrated a high degree of resourcefulness in meeting new situations;
10. did not differ from the comparison group in ability to plan their time effectively;
11. had about the same problems of adjustment as the comparison group, but approached their solution with greater effectiveness;
12. participated somewhat more frequently, and more often enjoyed appreciative experiences, in the arts;
13. participated more in all organized student groups except religious and "service" activities;
14. earned in each college year a higher percentage of non-academic honors (officership in organizations, election to managerial societies, athletic insignia, leading roles in dramatic and musical presentations);
15. did not differ from the comparison group in the quality of adjustment to their contemporaries;
16. differed only slightly from the comparison group in the kinds of judgment about their schooling;
17. had a somewhat better orientation toward the choice of a vocation;
18. demonstrated a more active concern for what was going on in the world.²

² Wilford M. Aikin, *The Story of the Eight-Year Study*, New York, Harper & Brothers, 1942, pp. 111-112.

Further, the graduates of the six "most progressive" high schools did better in college than did the graduates of the six "least progressive" schools.

This study quite definitely demonstrated that the usual college preparatory high school track or course might undergo considerable revision without interfering with the success of those students who go to college. You note that most of the items dealing with academic success showed the two groups about equal; those items dealing with nonacademic areas showed that the graduates from the experimental schools were somewhat superior.

That there has been considerable experimentation in curriculum practices, especially related to the classes required of all students, is apparent in the recent work of Alberty,³ who identified six types of programs operating in schools under the title "core":

Type I. The core consists of a number of logically organized subjects or fields of knowledge, each of which is taught independently.

Type II. The core consists of a number of logically organized subjects or fields of knowledge some or all of which are correlated.

Type III. The core consists of broad problems, units of work, or unifying themes which are chosen because they afford the means of effectively teaching the basic content of certain subjects or fields of knowledge. These subjects retain their identity, but the content is selected and taught with special reference to the chosen unit.

Type IV. The core consists of two or more subjects or fields of knowledge which are fused into a unified whole.

Type V. The core consists of broad preplanned or problem areas originating in the societal and psychobiological needs and interests of the students.

Type VI. The core consists of broad activities or units of work which are coöperatively planned by teachers and students in terms of the expressed wishes and desires of the group. No basic curriculum structure is preplanned.

Generally, experimentation in combining subjects and in setting up longer class periods is undertaken to find out whether the following

³ Harold B. Alberty, et al., *How to Develop a Core Program in the High School*, Columbus, Ohio State University, 1949.

outcomes are achieved more efficiently by this method than in short class periods which emphasize mastery of subject knowledge as such:

1. Can the teacher better learn and understand individual students in this situation?
2. Can the teacher help individuals more effectively with their academic and personal problems?
3. Can the problems common to a group of students be discovered more accurately and capitalized upon more efficiently?
4. Can problems involving social interaction and human relations in a democratic society be explored more fully so that students develop more effective social interaction skills?
5. Can instruction be organized which is more in harmony with the dynamic and continuous nature of the learning process?
6. Can students share in planning, executing, and evaluating learning activities more effectively?
7. Does the longer period allow for more meaningful learning such as that involved in field trips or broader problem-solving activities?
8. Can students learn the necessary subject materials more effectively when taught as tools to be used in solution of meaningful problems?

Two modern curriculum designs are now explored which attempt to achieve these and other values.

A FLEXIBLE SUBJECT-CENTERED DESIGN

Figure 4 presents the curricular organization of a senior high school. This school enrolls nearly nine hundred students; approximately three-fourths of the graduates go to college. In the opinion of the administration, the staff, and the students, this organization implemented by excellent teaching and counseling services has proved satisfactory in meeting the educational needs of all youth in the community who, by city ruling, are enabled or required to attend the school.

The school day commences at 8:00 in the morning and ends at 3:15 in the afternoon. The conference period runs from 8:00 to 8:30. No classes are scheduled during this period, but all faculty members are in their classrooms and counselors are in their offices. Attendance during this period is optional except for those students who are deficient in

| Daily Periods | Tenth Grade | Eleventh Grade | Twelfth Grade |
|-------------------|---|----------------------|----------------|
| Conference Period | PRE-PERIOD—for individual guidance and instruction—optional or required. | | |
| 1 | HEALTH AND PHYSICAL EDUCATION | | |
| 2 | SOCIAL STUDIES | SOCIAL STUDIES | SOCIAL STUDIES |
| 3 | ENGLISH | ENGLISH | |
| 4 | LIFE SCIENCE | | |
| 5 | | CURRICULAR ELECTIVES | |
| 6 | | | |
| 7 | COCURRICULAR ELECTIVES (government, assemblies, clubs and other activities) | | |

REQUIRED for General Education

ELECTIVES
Interests—avocational and vocational—including a fifth subject or study period.

Figure 4. Curricular Organization of Abraham Lincoln High School, San Jose, California.

school work and must attend. Thus, the entire staff is available for counseling students, and all students may use the conference period.

The next six periods are equal in length with a forty-minute lunch period. Health and physical education, social studies, English, and life science comprise the required or constant courses and are called general education. In each social studies class, a group of students is assigned to a teacher, as is frequently done in other schools in the homeroom program. Each teacher in the social studies class uses part of the class period for guidance activities, particularly of a group nature. Further, each social studies teacher may utilize the morning conference period, 8:00–8:30, to counsel individual students or to work with groups of students in planning activities or discussing problems of any kind.

Curricular electives, the usual subjects offered in modern high schools, are available for two periods in the tenth grade, three periods in the eleventh, and four in the twelfth. In these curricular electives, some students may complete two tracks—commercial and college preparatory, for instance. The school policy is for each student to take five classes and one cocurricular activity.

One striking phase of this organization is that cocurricular activities are an integral part of the total curriculum and are given equal school time with regular classes. All students may participate in cocurricular activities within the regularly scheduled school hours under staff supervision without increasing length of day for students and teachers. Another feature, which provides flexibility in both daily and weekly schedules, is incorporated in the seventh or cocurricular period. It is a "floating" period and may be scheduled between any two class periods. For example, when placed between second and third periods, the third, fourth, fifth, and sixth classes move down one period later in the day.

The cocurricular activities follow a weekly pattern of this general type:

- | | |
|----------|--|
| Monday: | The seventh period, on the chart called cocurricular, is a study period with one of the subjects repeated. |
| Tuesday: | Club day; hobby or interest clubs with faculty members as sponsors. |

| | |
|------------|---|
| Wednesday: | Whole-school assembly; usually of a cultural nature. |
| Thursday: | A study period, repeated in rotation. For example, if on Monday the study period followed the second period, on Thursday it follows the third period. |
| Friday: | Whole-school assembly; usually entertainment, a brief rally, or school dismissal for a cross-town athletic event. |

Illustrations of the variety of purposes which this period serves are:

1. Before the first period to collect materials for Red Cross.
2. Registration period for enrollment purposes or for issuance of report cards.
3. Extension of the second period, the social studies period, for organization of school-community "drives" of various types.
4. Whole-school assembly between second and third period on any day in the week when a speaker, musical group, or film is available.
5. Club meetings between the fifth and sixth periods.
6. Excusing the entire school a period earlier to attend a cross-town athletic event.
7. On an average of twice per week there is no all-school activity for this period. It then becomes a study period, and a subject period is repeated in rotation. Usually it is used for supervised study, individual conferences, or committee work. Its informal and individual character permits a weekly meeting of the Student Government, without penalty to the students and without subject class interference. Occasionally larger groups such as the senior class meet during this period while the rest of the school remains in class.

This organizational procedure has been in operation for a period of years in the post-World War II era. It represents a most progressive adaptation within a subject-centered design.

AN "EXPERIENCE-CENTERED" CORE DESIGN

The California State Curriculum Commission appointed a subcommittee, the California Framework Committee, to draft a framework for public education in California. In 1948 this group issued "A Framework for Public Education in California." Proposals were made related to the purposes of public education in California, basic principles of

education, breadth of experiences in California public schools, organization of the instructional program, and problems and practices. A summary of proposed experiences to be organized are carried out in all public schools and the organization of one city's instructional program or curricular design follow:

The Breadth of Experiences in California Public Schools

- I. Experiences leading to the objective of Full Realization of Individual Capacities
 - A. Experience in mastering and using the tools of learning
 - B. Experiences in healthful living
 - C. Experiences in becoming a real person
- II. Experiences leading to the objectives of Human Relationship
 - A. Experiences in working and playing with groups of peers
 - B. Experiences in learning the skills and understandings of Effective Family Living
 - C. Experiences in learning about other groups
- III. Experiences leading to attainment of the Objectives of Economic Efficiency
 - A. Experiences leading to becoming an economic producer
 - B. Experiences leading to becoming an effective consumer
- IV. Experiences leading to the attainment of the Objectives of Civic Responsibility
 - A. Experiences leading to an appreciation of democratic ideals
 - B. Experiences leading to an understanding of the obligations of responsible American citizenship and to the development of the necessary civic skills.

These experiences are to be provided in the "Organization of the Instructional Program." In Figure 5 one city's organization is presented.

In examining the junior and senior high school design, you note four important characteristics:

1. In grades seven through twelve physical education, including rest when needed, is a constant required; length of period one hour.
2. In grades seven through eleven a two-hour block of time is allotted for common learnings; this is reduced to one hour in grade twelve.

3. General science (including health instruction) and arithmetic are the two required classes in the junior high school.

4. Special and vocational education starts in grade nine with a one-hour period; this type of education increases until twelfth grade, when three or four single-hour periods are used for it.

This instructional program, grades seven through twelve, is designed to provide a core of common learnings for all youth and to offer a wide range of specialized courses for those youth preparing to go to college and for others preparing for adult participation in community life without going to college.

THE TEACHER AND CURRICULUM CONSTRUCTION

The beginning teacher or teacher in service cannot single-handedly change the overall design of a school's instructional program, nor should such attempt be made by an individual teacher. The process of altering design requires that all persons concerned with secondary education—students, teachers, parents, administrators, and state groups—contribute to the change. Thus, the already established sequence and time allotment in class periods in a particular school during a given semester must be followed. Within this framework, the primary tasks of the individual teacher in improving the curriculum are to select and organize content in the particular classes taught which meet the developmental needs of adolescents, to organize and direct learning activities according to established principles of learning, to manage the classroom democratically, and to coöperate with other teachers, administrators, and lay people in curriculum committees.

The coöperating role of classroom teachers in planning overall curricular design is analyzed by Krug.⁴ Five groups must work coöperatively to build curricula: (1) state-wide leadership groups, which may include teachers but are usually the staff of the state department of public instruction and other curriculum specialists; (2) local leadership groups, which include city or county superintendents of schools, building principals, supervisory staff, coördinators, and those classroom teachers who wish to exert leadership by serving on important com-

⁴ *Op. cit.*, pp. 8-23.

| Clock Hours | Kindergarten | Elementary | | | | Junior High | | Senior High |
|-------------|---|----------------------------------|-------------------------------------|---|--------------------------------|---|--|-------------|
| 1 | Informal Organization Flexible Time Allotments to Block Play; Outdoor Activities Semi-quiet Activities— Painting Clay Drawing Woodwork Music Rhythms | Phys. Ed. Rhythms Recesses | Phys. Ed. Rhythms Recesses | Phys. Ed. Rhythms Folk Dancing Recesses | Physical Education Recesses | | Physical Education Sports, Games, Exercises, Orthopedic Work; Rest (when needed) | |
| 2 | | | | Unit of work Social Studies Science Health Related Skills | | Social Living—Common Learnings includes social studies units; English skills; appreciation of literature, art, music; health; related science; family education; personal problems; and guidance activities. (Two-hour block of time except 12th year. Taught by one or two teachers.) | | |
| 3 | | | | Language-Arts-Reading | | | | |
| | | | | | Library | | | |
| | | Related Health Science Art | Related Health Science Art Spelling | Related Reading Spelling Writing | Related Skills | Arithmetic | Arithmetic | |

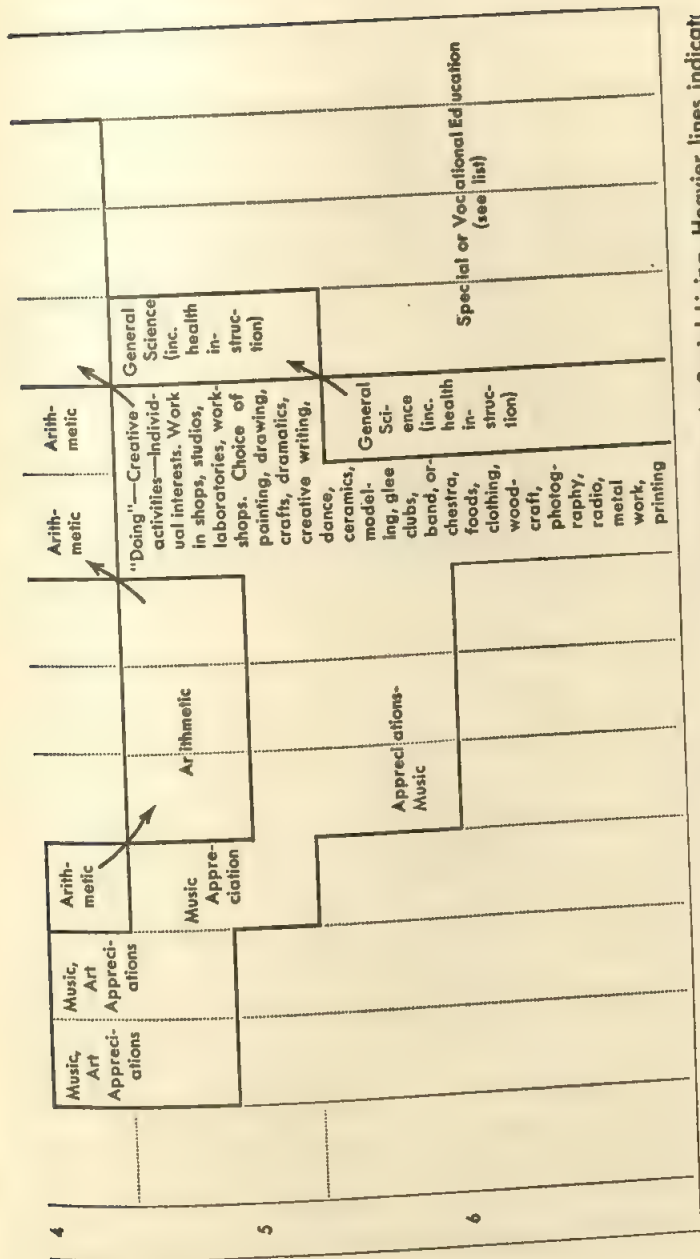


Figure 5. Curricular Organization with a Core Centering on Experiences in Social Living. Heavier lines indicate divisions ordinarily separate; broken lines indicate areas sometimes separate and sometimes related.



Special or Vocational Education

9th, 10th, 11th, and 12th grades

4th, 5th, and 6th periods (a period represents a clock hour)

12

English Literature
Poetry
Dramatics
Speech
Radio Production
Journalism
Business English
World Geography
Latin-American History
International Relations
Advanced Algebra

10

Algebra
Geometry
Arithmetic
Latin
French
Spanish
German
Typewriting
Bookkeeping
General Science
Biology
Radio
Photography

11

Biology, Physics
Chemistry
Botany, Geology
Radio
Photography
Trigonometry
Solid Geometry
Commercial Law
Shorthand
Office Practice
Advertising
Salesmanship
Office Appliances

9

Arithmetic
Algebra, General
Mathematics
French, Spanish
Latin
Agriculture
Industrial Arts
Homemaking
Typewriting
Everyday Business
Practices
Music
Art

Woodwork
Electricity
Auto Mechanics
Mechanical Drawing
Metal Work
Music—Vocal and Instrumental
Art
Foods
Clothing
Printing

Cooperative Marketing (4-4)
Stage Craft
Stage Costuming
Latin, German
French, Spanish
Commercial Art
Drawing and Painting
Foods
Clothing
Music—Vocal and Instrumental
Industrial Arts

Photography
Zoology
Physiology
Psychology
Biology
Industrial Arts
Cooperative Marketing
Art

Latin
French
Spanish
German
Foods
Clothing
Home Management
Home Nursing and Child Care
Music—Vocal and Instrumental
Music Theory
Chemistry
Physics
Botany

5

6

Figure 5. Curricular Organization with a Core Centering on Experiences in Social Living (continued).

mittees; (3) classroom teachers; (4) lay people; and (5) children and youth.

As one of five major groups, classroom teachers' participation falls into these major categories: (1) Every teacher should take part in study and discussion of the objectives of education; (2) teachers have the right to present their views on problems of the all-school program and to take part in discussions of those problems; (3) every teacher should at some time, but not all the time, participate in the work of a committee, dealing either with his own teaching field or with the overall problems of curriculum; (4) teachers should take part in those curriculum-planning activities which come closest to their own classroom work; and (5) the teacher's most important job in curriculum development is to do the best possible job of teaching. In the teaching-learning relationship curriculum comes alive. Classroom teachers, in the last analysis, can either make or break it.

The next section of this book deals with organizing learning activities and outlines procedures whereby instruction within the already established curriculum design may become vital and worth while for all youth. We shall first study methods for investigating important aspects of curriculum practice.

METHODS FOR INVESTIGATING CURRICULUM

An understanding of overall design already established in the school is a requisite first step toward improving both organization of curriculum and instructional procedures in the classroom and the school. Each state has responsibility for providing public education; the extent to which states delegate authority in curriculum construction varies widely. Through laws passed by legislatures and policies set up by state departments of public instruction, states control portions of each school's curriculum. County and city units also may set up common requirements for all schools within the local unit or may allow the individual school much freedom. Within the school, teachers of the same classes, such as eleventh-grade United States history, may organize learning activities which are very different or very much alike. Colleges and universities, too, may influence patterns of curriculum in a given school through their admission requirements; generally, the university

to which most of the high school graduates seek admission is most influential. All of these contributions to curriculum practice should be guided by the principle of organizing a sequence and scope of learning activities which will be of worth to each youth of school age in the community.

Six sample investigations which may be undertaken to appraise curriculum practices and instructional procedures are now outlined.

1. To learn how the constant part of the curriculum may achieve the Ten Imperative Educational Needs in a given school: Secure a program of studies of a school and mark those subjects or classes required of all students for graduation. After each such requirement, put in the number of the educational need as discussed in Chapter 1 which this subject or class might assist in developing. After completing this listing, encircle the number of the need for which a particular class should take major responsibility. Do the same for the "experience-centered" curriculum outlined in this chapter. List the major differences, if any, which you discover through such comparison. Follow the same procedure using the developmental tasks of adolescents outlined in Chapter 2 and the five ideals of democratic living outlined in Chapter 4 to discover responsibilities of teachers in the various areas of instruction.

2. To learn how instructional procedures are organized in a required class and among required classes: On consecutive days visit the classrooms of at least two teachers in the same classes, such as tenth-grade English, eleventh-grade United States history, ninth-grade general science, or other required classes. As you observe, answer these questions: What school-community resources are used? How well is the textbook used? Is instructional method primarily directed toward stressing facts and information or are problem-solving activities engaged in by the students? How variable are the assignments or problems in which the students are engaged? Which of the Ten Imperative Needs of Youth are the students attempting to satisfy? What are the major differences in instructional procedures between two teachers of the same classes? What are the major differences in instructional procedures employed among teachers in the different classes?

3. To find out the extent of state authority over curriculum: The

state department of public instruction publishes all laws affecting public instruction, also a "state course of study" in which requirements affecting curricular offerings are outlined. These may be obtained upon request from the state department; usually they are available in college libraries and from local school administrators. Secure the state's course of study to answer the following questions: What subjects or classes are required by the state for all students attending high school in the state? What fractional part of the total curriculum is controlled by the state? What provisions are made concerning grade level in which a subject shall be offered? What state provisions are made for selection of textbooks? What limitations are placed upon the schools in range of special tracks or courses which may be offered? Does the federal government control any phase of curriculum design?

4. To identify the curriculum requirements in schools within a local unit: Administrators of county and city units organize a guide for individual schools to follow. This manual incorporates state and local prescriptions including policies for selecting textbooks and lists of textbooks where such are determined outside the local school. Secure a manual and a program of studies from at least two different schools within the local unit. Examine the courses of study as follows: First, find all the subjects or classes required by the state; second, find those additional subjects or classes required by the locality; third, list the names of any textbooks required to be used; and fourth, add the total units required to discover what part of the curriculum is prescribed for all students. Using the same program of studies, find out what extra-curricular activities are offered without credit and with credit.

5. To discover a particular school's program of curriculum development: Interview the principal or teachers in a school to learn how the principal or other administrative assistants are organized to study problems of curriculum; how the teachers within the school are organized for this purpose; and to what extent parents and students are represented in curriculum committees or curriculum meetings.

6. To ascertain the extent and manner in which college and university requirements are incorporated in a school's program of studies: Make a list of the admission requirements of a number of leading colleges and universities in the state. (Senior high school principals and

guidance personnel maintain such listings of the institutions to which their graduates go.) Rank in order the subjects or classes required most frequently and the number of units or years which are required. Compare this listing with the program of studies of a particular high school, with the flexible subject-centered curriculum outlined in Figure 4, and with the "experience-centered" curriculum outlined in Figure 5. Determine the extent to which college admission requirements are met in the constant and elective parts of each curriculum examined. In your state, do those colleges and universities which have no requirements for admission other than holding a high school diploma influence curricular design, as do those having prescriptions?

Investigations, conducted individually and by groups, help teachers understand the overall curriculum design. Such understanding assists in defining and locating those experiences which are regarded as important for youth by many educational leaders in the community and state. Each teacher can more effectively organize specific learning experiences when the total program is understood.

SUMMARY

All learning activities which are organized by the school and over which the school has control constitute the school's curriculum. The secondary school should attempt to organize the sequence and scope of all the learning activities to achieve the general goals of secondary education and the more specific objectives of the local school so that the schools promote desirable learnings.

In 1900 instruction in separate subjects which were college preparatory in nature dominated the high school curriculum. As more youth went to high school and as our society changed rapidly from agrarian to urbanized, this pattern has changed slowly. We now understand more clearly the nature of adolescents, of learning, and of democratic living, and the role of secondary education in relation to them.

To organize learning activities more closely related to the nature of adolescents, the continuous and dynamic nature of learning, and the characteristics of life in a democratic society, the high schools have experimented with (1) correlating subjects from separate fields, (2) combining separate subjects into broad fields, (3) setting up classes

in which subject lines are ignored, (4) increasing length of class periods, (5) removing some of the usual college preparatory classes, particularly foreign languages and advanced mathematics, from that part of the instructional program required of all students for graduation, and (6) giving more freedom of choice to teachers and students in selecting learning activities within a particular class.

Various curriculum patterns now operate in modern junior and senior high schools. Each teacher must understand curriculum design and practices in order to become effective in organizing learning activities for students in a particular school and classroom and in order to assume a reasonable share of responsibility for improving the curriculum to meet the needs of all American youth in a rapidly changing world.

QUESTIONS AND ACTIVITIES

1. Explain the relationship between goals of education and the curriculum.
2. What is meant by a separate-subject, broad-fields, integrated, and core class? List some classes which you took in college which fit each of these categories.
3. What do the terms "child-centered curriculum," "integrated curriculum," "life adjustment," "general education," and "common learnings" mean?
4. Conduct a sociodrama to indicate the offerings in the Latin grammar school, the academy, and the English High School. Three students may take the roles of principals from each of these schools.
5. Compare your high school transcript with the major, minor, and unit recommendations made by the Committee on College Entrance Requirements in 1911.
6. How did preparation for college gain so much influence on high school curricula?
7. What are the strengths and weaknesses of departmentalized instruction in a pattern of single subjects and short class periods in the junior high school?
8. What main conclusions do you draw from the Eight-Year Study concerning curriculum design and success in college?

9. Review the six types of "core" curricula identified by Alberty. Group the required courses you took in high school into these six categories.
10. Secondary teachers often state that they have too many students to know them sufficiently well to guide their total growth effectively. How could this situation be alleviated through curriculum reorganization?
11. What are the major differences between "general education" in the San Jose program and "common learnings" in the California program? How do the two compare in time allotted for electives? Where does the college-preparatory track fit in each design?
12. Discuss the most important tasks of the teacher in curriculum construction as defined by Krug.
13. List the minimum information which each teacher in a school should possess concerning its curriculum pattern.

REFERENCES

-
- Alberty, Harold B., *Reorganizing the High School Curriculum*, New York, The Macmillan Company, 1947.
- Association for Supervision and Curriculum Development, *Action for Curriculum Improvement*, Washington, National Education Association, 1951.
- Briggs, Thomas H., et al., *Secondary Education*, New York, The Macmillan Company, rev. ed., 1950, chaps. 9, 10.
- Caswell, Hollis (ed.), *The American High School*, New York, Harper & Brothers, 1946, chaps. 7, 8, 9.
- Chamberlain, Dean, et al., *Did They Succeed in College?* New York, Harper & Brothers, 1942.
- Douglass, Harl R., *The High School Curriculum*, New York, The Ronald Press Company, 1947.
- Edwards, Newton, and Richey, Herman G., *The School in the American Social Order*, Boston, Houghton Mifflin Company, 1947, chap. 19.
- Gruhn, Walter T., and Douglass, Harl R., *The Modern Junior High School*, New York, The Ronald Press Company, 1947, chaps. 5, 6, 7.
- Krug, Edward A., *Curriculum Planning*, New York, Harper & Brothers, 1950.
- Leonard, J. Paul, *Developing the Secondary School Curriculum*, New York, Rinehart and Company, 1946.

- MacConnell, Charles, et al., *New Schools for a New Culture*, New York, Harper & Brothers, 1943, chaps. 3, 4, 5, 6.
- National Education Association, *Report of the Committee of Ten on Secondary School Studies*, New York, American Book Company, 1894.
- National Education Association, *Report of the Committee of Fifteen on Education*, New York, American Book Company, 1895.
- National Education Association, *Report of the Committee on College Entrance Requirements*, Chicago, University of Chicago Press, 1899.
- National Education Association, *Report of the Committee of the National Council on Economy of Time in Education*, Washington, U.S. Government Printing Office, 1913.
- National Society for the Study of Education, *Education in the Postwar Period, Forty-Fourth Yearbook*, Chicago, University of Chicago Press, 1945, Part I.
- North Central Association of Secondary Schools and Colleges, *General Education in the American High School*, Chicago, Scott, Foresman and Company, 1945.
- President's Commission on Higher Education, *Higher Education for American Democracy*, vols. 1-4, Washington, U.S. Government Printing Office, 1947.
- Rivlin, Harry N., *Teaching Adolescents in the Secondary Schools*, New York, Appleton-Century-Crofts, Inc., 1948, chap. 2.
- Rugg, Harold, *Foundations for American Education*, Yonkers, World Book Company, 1947, chap. 22.
- Spears, Harold, *The High School for Today*, New York, American Book Company, 1950, chap. 6.
- Stratemeyer, Florence B., et al., *Developing a Curriculum for Modern Living*, New York, Bureau of Publications, Teachers College, Columbia University, 1947.
- Wrightstone, John W., *Appraisal of Experimental High School Practices*, New York, Bureau of Publications, Teachers College, Columbia University, 1936.
- Wrinkle, William L., and Gilchrist, Robert S., *Secondary Education for American Democracy*, New York, Farrar and Rinehart, Inc., 1942, Part III.

CHAPTER 6

Planning for Classroom Instruction

In the previous chapters we examined the goals of secondary education, the developmental tasks of adolescence, the dynamic nature of learning, the ideals of democratic living, and the organization of curriculum. Throughout we were concerned with building understandings in these foundational areas to guide our activities in teaching adolescents. We also examined procedures for developing skills in each of the five areas. These understandings and skills are requisite for planning learning experiences for adolescents. To organize effective learning activities requires planning prior to commencing actual classroom instruction and planning while instruction is in progress. The teacher is concerned with answering these questions in planning:

1. What objectives are to be achieved?
2. What learning activities engaged in by the students will achieve the objectives?
3. How will these activities be organized and guided by the teacher?
4. What materials and resources within and outside the school are necessary to make the activities meaningful to the students?
5. How can the extent to which the objectives are achieved be ascertained?

In this chapter we shall examine procedures and principles in planning for classroom instruction. In Chapter 7, specific problems in initiating learning activities are analyzed; in Chapter 8, procedures for carrying learning activities to successful completion are treated.

OVERALL PLANNING

In any kind of planning which directs action, such as an architect's blueprint of a home or a scientist's outline of an experiment, three stages are identified. First, an overall design or blueprint of action is outlined. This is a clearly defined statement which delimits the total structure and indicates the major activities and kinds of materials necessary to achieve the desired outcomes. Second, this structural plan is broken into cohesive units which are outlined in more detail. Each unit, while relatively independent, may not vary so much that the total structure or major outcomes will be greatly altered. Finally, specific details within each unit are organized. The details vary most in any kind of planning and are most subject to the specific situations and resources available when the plan is put into effect. These three stages correspond to overall planning, unit planning, and daily planning and provide a framework in which to plan learning activities for adolescents.

The overall plan, developed prior to actual teaching, is useful for organizing materials and human resources to meet the needs of a group of adolescents growing into maturity. The major purpose is to provide maximum continuity of learning activities for the entire length of time the teacher has a group of learners. Examine the following framework in overall planning as a structure within which to organize this phase of planning.

Framework for Overall Planning

1. State the age and grade level of the learners.
2. Indicate the total length of time you will teach this group.
3. Formulate the major objectives to be achieved. State these objectives as the most important understandings, skills, and attitudes which the learners will develop.
4. Organize a sequence of major units or problem areas through which the objectives will be achieved. Estimate time required to complete each.
5. List the important materials and resources which will be needed.
6. Outline the different types of evaluational procedures which will be used to determine student growth in understandings, skills, and attitudes.

The first phase in planning need not be long or detailed. At this point you are concerned with the major aspects of the teaching-learning situation and do not want to include details which obstruct your vision of the total structure. This is your guide to provide the bold, sharp outline where most important features stand out clearly and are readily perceived.

The functions of the overall plan are to fix the important objectives toward which the students and teacher will direct their attention and energy, to outline major units or problem areas and the order in which they will be undertaken, to locate major sources of information and materials, and to analyze evaluation procedures needed to appraise student growth in understandings, skills, and attitudes.

Is it necessary for all teachers to plan in advance as indicated? Growth in understandings, skills, and attitudes is a continuous process. Because the teacher's primary role is to assist learners in this process, planning continuity for the entire length of time during which the teacher has a group of learners is a responsibility which each teacher assumes. Usually this length of time is a semester or year; if the teacher has a group for several years, then planning at this stage is carried out for that length of time.

Where may a prospective teacher or one beginning service locate information to build an overall plan? One avenue is to approach an experienced teacher. A student teacher, for example, anticipates that the master teacher with whom he works has such plans for the semester or year. A second source is the course of study in a particular school. Increasingly, courses of study are being organized to include an outline of subject-matter content organized in units with recommended activities to be carried out, methods to be employed, and materials which may be utilized. A third source is professional journals, general journals, and those in particular fields. Many concrete illustrations of how teachers carry out instruction with particular groups of students are being included in these journals. A fourth avenue is to examine textbooks, workbooks for students, and manuals for teacher use which accompany a given text.

Examine an abbreviated outline drawn from the *Teacher's Manual for How and Why Explorations*, a textbook written for use in seventh-

grade science classes.¹ This manual facilitates teacher use of the text and a *Companion Book* (a workbook for student use). The outline which follows indicates the kind of materials contained in the manual and is included at this point to help you visualize an overall plan and to clarify terminology used throughout this chapter:

- I. Grade level: Seventh.
- II. Length of time: One year; class meets one hour per day, five days per week.
- III. Major objectives to be achieved:
 - A. Understandings: The student understands (1) the basic causes of fingerprints, (2) blood types, (3) the effects of light, (4) atomic energy, (5) changes which occur in his skin, (6) forest fires, (7) growth of trees, (8) behavior in relation to food in the body, (9) weather changes, (10) functioning of electric motors, (11) plant reproduction, (12) growth of teeth, (13) the functioning of railroad engines, (14) water in the community, and (15) the kinds of rocks within the community. The facts and principles related to these are used by students as tools to analyze cause of events, to analyze the results of events, to predict the results of events, and to explain the results of events.
 - B. Skills: The student develops these skills:
 1. Uses scientific information to predict what will happen in the human body.
 2. Uses scientific information to explain events in his home.
 3. Uses scientific information to explain events which occur in his community.
 4. Uses these steps in problem solving—identifies problems, gathers information, analyzes information, synthesizes information, draws conclusions, and tests conclusions.
 5. Uses an index correctly.
 6. Obtains information from maps.
 7. Reads for specific information.
 8. Selects main ideas in a paragraph.
 9. Selects information from a table.
 10. Uses reading signals.
 11. Records information accurately in diagram form.

¹ Donald G. Decker, *A Teacher's Manual to Accompany How and Why Explorations*, Book VII, Syracuse, the L. W. Singer Company, 1948, pp. 1-104.

12. Records information accurately by drawing.
13. Records information accurately in graph form.
14. Uses safety skills.
15. Experiments as a source of information.

IV. Sequence of units.

- A. The sequence of fifteen units is identical to the sequence of objectives listed as understandings. Each unit carries a title similar to that contained in the statement of understandings, and amount of time for carrying out each unit is suggested.
- B. Sequence within units: A sequence of activities within each unit follows the general pattern of seven steps in problem solving, Number 4, listed above:

1. Student activities involving listening, reading, discussing, and observing films and demonstrations are utilized to identify problems, to secure an overview of the unit, and to plan procedures with the teacher for securing information. Written exercises are employed to build skill in identifying and stating problems and in planning procedures.
2. Activities like reading the text and other materials, working exercises in the *Companion Book*, listening, observing teacher demonstrations, securing data through experimentation, and gathering materials and information outside the classroom are utilized to establish understandings and to discover applications. Written and oral exercises are utilized wherein skills in analyzing and synthesizing information are developed.
3. Making graphs, charts, maps, writing reports, and examining information presented this way are used to build particular skills and understandings.
4. Discussing, writing, listening, and experimenting are engaged in to fix understandings and skills, to discover further applications, and to test generalizations.

V. Materials and resources within the school and community:

- A. Material resources are organized under six general headings:
 1. Planning the science room.
 2. The planning and purchase of equipment.
 3. Home-made equipment.
 4. Provisions for use of visual aids—suggested films and slides are included.
 5. Practical references for students and teacher.

6. Pages in the text and in the *Companion Book* related to each unit.

B. Community resources are outlined; representative examples:

1. Inviting into the classroom a policeman who is a fingerprint expert to explain how identification by fingerprint is accomplished.
2. Inviting into the classroom a nurse or parent to explain the kind of diet a diabetic child must have.
3. Securing blood from a hospital for investigation in the classroom.
4. Securing passports from those who have traveled outside the country for examination in the classroom.

VI. Outline of evaluation procedures:

- A. The teacher records how well each student achieves the objectives previously listed in this manner: An *O* to indicate outstanding achievement, an *S* for satisfactory achievement, and *N* if the student needs to improve, and a *U* if the student's work is unsatisfactory. This evaluation is carried out continuously as the students engage in the various activities.
- B. Students keep own records of progress as they carry out activities in the units.
- C. Written exercises, including tests, are used to appraise growth in understanding and skills.
- D. Data obtained through procedures listed above may be used to evaluate students in relation to each other; to assign marks when administrative necessity requires marking on a comparative basis rather than on individual growth.

This abbreviated outline indicates how materials may be organized into a meaningful framework or pattern. In the outline, systematic arrangement of scientific concepts and related skills provides sequence of units, and the seven steps in problem solving indicate sequence of activities within units. Frequently systematic organization of subject content is used in determining major units and their sequence.

There are other bases for organizing major units. Successive problems to be solved or projects to be completed may indicate unit areas and their sequence; these are usually organized around some central unifying theme for the semester or year. In some courses students as-

sume major responsibility for deciding activities in which they will engage and for organizing units of work. The need for overall planning by the teacher for this type of unit building by students is imperative—perhaps more so than in areas where systematized subject matter is used as the basis for organizing units. Except with the most mature students who have had considerable experience in planning activities, the teacher runs the definite risk of falling into all the pitfalls previously outlined under *laissez-faire* leadership unless probable activities and effective procedures for guiding the students have been preplanned.

UNIT PLANNING

After the overall plan has been organized, the next step is to organize individual units. Not all the units need to be outlined prior to meeting the class for the first time, but the first units should be. The reason for organizing student work activities and instructional procedures related thereto in units rather than in daily plans will become apparent as we examine a framework for planning a unit and characteristics of units.

CHARACTERISTICS OF UNITS

General characteristics of units may be previewed briefly in terms of time allocation, underlying bases, and activities.

A unit is always planned for a longer period of time than one class period, and it may continue for a semester or year. One month or one grading period is frequently used. The main reason for the longer period of time is that the learning process can be implemented more effectively when a series of related activities are organized for a longer period of time. It is extremely difficult, if not impossible, to use time efficiently in facilitating students' learning when each day's work is to constitute a complete learning experience in itself. Students are often unable to discover the relationship between each day's experiences and therefore cannot organize the daily experiences into a pattern of meaningful learning.

Units may be planned on the basis of (1) content within a single subject, such as a unit on modern short stories in a literature class, (2) content which crosses single subject lines into broad fields, such as a

unit in social studies—how air transportation affects social, economic, and political life in the community, or (3) projects or problems which utilize various fields of information—how to improve recreational facilities in the school and community. The distinction among the three is not sharply defined in actual practice, for the teacher may plan for student activities crossing single subjects and broad fields in the first two; or, in the latter, students may develop a high degree of subject understandings and facility in related skills through engaging in solution of broader problems.

Units usually include many different kinds of student activities: reading from different sources, listening to the teacher or classmates, individual and committee work, group discussion, written and oral reports, visiting outside the classroom, construction in which creative and artistic talents may be employed, dramatization, experimentation, observing and analyzing films, and others. In classes such as typing and shorthand the variety of activities is not so broad as in social studies and English. However, in all classes the order in which activities are planned is determined by one's concept of the successive steps students go through in learning the understanding or skill. Activities are always selected on the basis of their probable effectiveness in building understandings, skills, or attitudes.

TYPES OF UNITS

Units are usually designated as resource units or teaching units. Each has special characteristics.

A resource unit, an example of which appears in abbreviated form in Appendix B, is usually worked out by a group of teachers; the general plan and specific parts of it may be used in a number of different teaching situations. Published resource units are usually organized as follows: (1) a title, (2) a relatively long introductory statement of facts and information related to a unit topic, such as *The Health of a Nation* or *Planning in Democracy*,² (3) a statement of objectives or anticipated outcomes, (4) suggested problems and questions, (5) sug-

²The first title is one of twenty-two resource units published jointly by the National Council for the Social Studies and the National Association of Secondary School Principals. The latter title is one of a series published by the National Council for Social Studies.

gested activities, (6) evaluation procedures, and (7) a bibliography of teaching aids—books, pamphlets, films, recordings, and community resources. Much attention is given to suggested teaching-learning activities and instructional materials. From the many suggestions, the teacher selects or adapts those which may be useful in a specific situation. Resource units are helpful to a teacher in planning activities with a class, in preparing a teaching unit, and in gaining a more comprehensive understanding of instructional techniques used by other teachers interested in the same general area.

Increasingly, groups of teachers are coöperating in building resource units. Through building resource units teachers are able to locate and solve common problems of teaching, gather concrete suggestions which may be put into practice immediately, and produce guides for instruction which are more useful than some frequently contained in courses of study.

A teaching unit is organized by a teacher for a specific classroom situation. Usually the unit is built prior to actual teaching and includes the essential components previously outlined in overall planning. The content guide, activities, use of text and other materials, and evaluation procedures are organized in the manner and order in which they are intended for use.

Teaching units vary widely in allowance for student participation in planning. In some instances the teacher distributes copies of the unit to guide the students' work activities. Dates upon which assignments are to be completed, selections from books are to be read, tests are to be administered, class discussion is to be held, and form in which activities are to be completed are clearly specified. Provision may or may not be made for students to select from among various assignments or activities. In these instances the teacher definitely plans and writes the unit for student use. In other cases the teacher writes the unit for personal use and incorporates provisions for students to share in defining objectives, deciding content, planning activities, and devising evaluation procedures.

Allowing students to share in planning does not mean that the teacher spends less time in planning; usually more time is required. The extent to which students share in planning is dependent upon (1)

the nature of the learning involved, (2) the ability of the students to share in planning, (3) the attitude of the teacher toward student participation, (4) the skill of the teacher in guiding students' planning, and (5) the requirements set up for the particular class by school authorities. In the discussion which follows immediately and in illustrations of units in the next two chapters, teaching units are surveyed which allow the students maximum participation in planning as they and the teacher are ready for it. As you analyze the framework for a teaching unit, decide where definite provisions should be incorporated for students to share in planning after instruction is under way.

Framework for a Teaching Unit

- I. Introductory statement
 - A. State the age and grade level for which the unit is planned.
 - B. Indicate length of time needed to carry out the unit.
 - C. Briefly state how this unit fits into the overall plan.
- II. Objectives stated as understandings, skills, and attitudes.
 - A. Outline the specific understandings which students will develop.
 - B. State the specific skills which students will build.
 - C. Outline the specific attitudes which students will develop.
- III. Content outline.
 - A. Outline the major subject-matter content, or
 - B. Outline a statement of problems to be solved, or
 - C. Outline a series of projects to be completed.
- IV. Activities in which students will engage to achieve objectives.
 - A. Initiatory activities.
 1. Outline a series of activities in which students will engage to make a successful beginning. Indicate the sequence of these activities according to your concept of how a good teaching-learning situation is initiated.
 2. Indicate the time anticipated for initiating the unit.
 - B. Developmental activities.
 1. Outline the activities in which the students will engage to develop understandings, skills, and attitudes. Indicate sequence in terms of how you think the understandings, skills, and attitudes are learned.
 2. Estimate the time needed to carry out this phase.
 - C. Culminating activities.

1. Outline a summarizing activity or group of activities toward which each student can contribute, toward which the whole group will direct effort throughout the major portion of the learning period, which will best satisfy each student's need for approval of classmates and others, and which will promote a good attitude toward classmates, teacher, school.
2. Indicate length of time for this phase of carrying out the unit.

V. Materials and resources.

- A. Locate reading materials, audio-visual materials, materials for demonstration and experimentation which are needed to make the activities most worth while.
- B. Locate and outline types of facilities outside the classroom in the school and community which will be used.
- C. Locate and identify procedures for bringing community persons into the classroom and for taking the students into the community.
- D. When students are to make contacts with persons outside the classroom or are to secure materials, outline the procedures which will be employed by you to facilitate such activities.

VI. Evaluation procedures.

- A. Outline the procedures which will be employed to determine where students are at the beginning.
- B. Outline the methods to be used in assisting students to measure their own progress.
- C. Outline procedures which you will use to measure student growth in understandings, skills, and attitudes throughout the unit.

In using this framework for planning units, you will adapt it according to the proposed learning and the characteristics of the group of adolescents being taught by varying the emphasis given to the parts. All teachers are, however, concerned with each of the six major aspects: (1) the developmental level of the learners, (2) the objectives which indicate understandings, skills, and attitudes to be developed, (3) the subject-matter content and related skills or problems to be solved, (4) a sequential series of activities, meaningful and interesting, guided by the teacher to lead the students from where they are to where they will be, (5) an outline of materials and resources, and (6) measures to evaluate the extent and quality of growth. Consider each of these more critically.

INTRODUCTORY STATEMENT

In the framework set forth for unit planning, the introductory statement includes three major parts: the age or grade level at which it is to be used, the anticipated time needed to carry out the unit, and a brief statement of the relation of this unit to other units. These three points are considered and are set down in written form for the teacher's own purposes, not as a means of introducing the unit work to the class. Procedures to get a unit started in the classroom are designated as initiatory activities.

The first step in planning a unit is to consider the interest patterns and achievement levels of the learners. The teacher who has had a class for some time usually can estimate these characteristics quite accurately. Examination of cumulative records and discussion with experienced teachers helps the beginner estimate interest and achievement levels of a group for which a unit is being organized.

Length of time to carry a unit to completion must be estimated in planning because most classes meet for a specified number of minutes per day, hours per week, and days per month. Within these limits, learning activities must be completed. Flexibility may be provided for by extending or shortening other units when teaching. Estimated time for completing a unit should be departed from when doing so facilitates learning for the students.

The teacher should decide how this unit fits into the overall plan in order to assure continuity of learning. Units that are well planned and executed flow smoothly from one into the next. Each unit builds on the preceding one. Three ways in which to show this relationship while planning are to indicate a series of related understandings, progressive levels of skills, or successive problems related to the overall theme and plan.

OBJECTIVES OF THE UNIT

Unit objectives are more specific and detailed than those in the overall plan. However, if one has already built a fairly adequate statement of objectives for the semester or year, the unit objectives should require little time for formulating. The major problems are to make sure that

the objectives (1) are socially valid, (2) are not too difficult or too easy for the students to achieve, and (3) are stated in sufficiently concrete terms to serve as guides for evaluation.

Social validity refers to the significance of the objectives from the standpoint of what society considers of value and worth. One can determine social validity of objectives by examining the statement of school aims or the general goals of secondary education as set forth in the Ten Imperative Needs of Youth which were outlined in Chapter I. If we accept the Ten Imperative Needs as a statement which society accepts as significant and of value, besides getting ideas for objectives, we check our objectives with the first three words appearing in each: "All youth need." We have eliminated many high school students by not giving sufficient consideration to these words in formulating objectives of classroom instruction and in actual teaching practice.

It is difficult to predict with accuracy the degree of understanding and skill that students will achieve during a given length of time. Also, students vary widely in ability and achievement. We should not fix an average level to be attained because this, if rigidly followed in practice, eliminates the slower learners and tends to impede progress of the more rapid. Therefore, in most unit plans objectives should be expressed to indicate the general level of performance anticipated with the assumption that each learner will develop a higher level than he had at the beginning of the unit.

Objectives may be stated clearly as understandings, skills, and attitudes. This classification for instructional objectives is employed because most, if not all, learning involves reaching a better understanding of concepts or processes, building a higher level of skill, and either developing new attitudes or changing attitudes toward the learning activity, the teacher, other students, and self. The term "attitude" is used rather than "interest," "appreciation," or "value" because it is more comprehensive. Teachers who prefer the latter terms should follow their preferences. The important point in planning is to give equal consideration to attitudes or interests as to understandings and skills. Sometimes we become so concerned with understandings and skills that we fail to recognize student behavior which is indicative of disinterest, boredom, or actual dislike of the whole teaching-learning situation.

The statement of objectives should be expressed in a form which serves as the basis of evaluation. Thus understandings, skills, and attitudes are expressed in terms of student behaviors or actions in such manner that one can ascertain whether a student is achieving this kind of behavior or not and the degree to which it is being attained. An objective which serves this function can best be stated beginning with a verb, the student understood as the "doer" or subject. Sample behavioral objectives, grouped as understandings, skills, and attitudes, which meet all the definitive criteria discussed thus far are now presented.

In a unit dealing with plant reproduction, outlined in the *Teacher's Manual* for seventh-grade science,³ these understandings or science concepts are to be developed.

The student understands that:

1. There are two kinds of flowers, perfect and imperfect.
2. Some plants contain only male organs.
3. Some plants contain only female organs.
4. Plants are composed of various structures.
5. Structures of male and female plants differ.
6. Male plants produce pollen.
7. Female plants produce eggs.
8. Reduction division occurs in sperm and egg cells.
9. Sperm cells fertilize egg cells.
10. Most plants contain both male and female organs.

This partial statement of objectives for a unit expressed as understandings is specific and provides ten useful criteria for evaluation.

In a unit, How to Improve Recreational Facilities in the School and in the Community, a social skill to be developed is: "The student works coöperatively with classmates." The objective probably needs further definition for evaluation purposes. What does the student who coöperates do as distinguished from the one who does not?

1. Volunteers own ideas in his group.
2. Listens attentively to others.

³ Donald G. Decker, *op. cit.*, p. 79. (You may refer to the previous outline of skills and evaluation procedures from this source to note how objectives expressed as skills, activities to develop skills, and evaluation procedures are related.)

3. Maintains calmness in discussion.
4. Is courteous.
5. Secures information for his group.
6. Carries group-appointed tasks to completion.
7. Assumes responsibility for own contribution to his group.
8. Assumes responsibility for getting the group's work completed.

These eight objectives do not include all the behaviors students exhibit while developing skill in working coöperatively, but they are sufficiently specific to provide a basis for teacher evaluation of student progress and also for students to evaluate own and other members progress.

Now investigate how a specific attitude is expressed clearly. In a vocal class, besides developing understandings and skills, an attitude to be developed is: "Prefers good music." What does the student do who develops a favorable predisposition (attitude) toward good music?

1. Participates in singing good music.
2. Memorizes words and melodies.
3. Listens attentively to records in class.
4. Criticizes records on basis of preference for good.
5. Listens to broadcasts of good programs.
6. Attends good music programs whenever possible.
7. Reads biographies of composers.
8. Buys records of the good.
9. Joins school music organizations.
10. Brings good music into the home and into other social groups for recreation.

These ten objectives are sufficiently clear to provide criteria for evaluation; they may not include all which you would select. You will probably agree that if desired attitudes are being formed in this class, students must show some of the above behaviors. If they develop none of them, then the class is not contributing toward developing the attitude.

CONTENT GUIDE

Objectives which are clearly expressed point toward content. Understandings indicate necessary facts and information, and skills indicate methodology. These two combined with attitudes may be adequately comprehensive to indicate content of the unit but usually are not sufficiently specific so that this part of the unit plan may be omitted.

Five ways in which to organize content are (1) a topical outline of subject matter, (2) an outline of the developmental sequence of a skill, (3) a statement of developmental problems, (4) an outline of projects, or (5) a combination of these. A content guide for a unit in United States history might be divided into major problems with an outline of subject matter and a breakdown of social skills to be built through solving the problems, or it might follow a chronological arrangement. The particular way in which the content guide is organized most effectively depends upon the specific outcomes sought. The degree to which specifics need to be incorporated in the content guide depends largely upon the teacher's mastery of the field. Generally, a brief statement of major emphases in the unit to be supplemented with specifics in daily planning proves effective. The content guide of the unit serves to assure that major areas are not omitted and that minor aspects are not overemphasized.

UNIT ACTIVITIES

Most classroom activities may be grouped into four major categories: (1) teacher-centered, involving listening and observing on the part of the students; (2) student-centered and individualized, in which the students work individually and the teacher assists individuals; (3) student-centered and cooperative, such as projects and problem-solving activities in which students work together in committees and the teacher assists groups and individuals; and (4) discussions, in which the class participates as a unit or as committees with frequent interaction between teacher and students and among students.

Activities in a unit are organized according to the developmental sequence of learning. They may be arranged in a pattern of initiatory,

developmental, and culminating activities. We shall examine the major purposes to be fulfilled as a means of identifying criteria to be employed in selecting a sequential series of learning activities to achieve the objectives of the unit. In Chapters 7 and 8 these activities are treated in more detail.

Initiatory activities are planned and organized so that students do these things: (1) focus attention toward the teacher and the proposed outcomes; (2) secure an overview of the unit; (3) discover values which may be gained; (4) feel a need to expend energy in carrying out individual or group activities or both; (5) plan procedures with the teacher for engaging in and carrying out particular activities; and (6) establish group objectives and individual objectives.

During the initiatory period the teacher wants to come to know each student as an individual; to learn characteristics of the group, particularly their interests, range in achievement, and different kinds of abilities which may be developed; and to establish a good emotional atmosphere in the classroom.

Developmental activities follow smoothly from initiatory and are so organized that the students do these things: first, continue interest in their work; second, gain a clearer perspective of goals and methods for achieving them; and third, develop understandings, skills, and attitudes while carrying activities to successful completion. The teacher uses appropriate methods so that individual differences are provided for; thus each student achieves his potential as related to the unit. These activities must be selected, organized, and directed so that mediocrity is not enforced upon the superior nor are those with lesser achievement or slower rate of learning eliminated. Except for highly selected groups, developmental activities designed to provide for a wide range in final achievement should be selected.

To assist learners to summarize experiences, discover further applications of newly built understandings and skills, fix favorable attitudes, and discover new goals culminating activities are organized. In teaching, there is no sharp break between any two of these stages; one moves smoothly into the next. A culminating activity is usually considered and planned in the initial period, and the developmental activities are carried out to make the final one a success experience for all students.

OUTLINE OF RESOURCES AND MATERIALS

Four types of materials and resources were outlined in the framework for planning a unit: reading materials, audio-visual aids, materials for demonstration and experimentation, and school-community resources including personnel. Needed materials and resources are determined first by the nature of the learning activities. For every kind of learning activity there are materials and resources which are necessary to make it most meaningful to the learners. All possible sources for obtaining necessary materials and resources should be explored in planning the unit so that the learning process is most effectively implemented. Securing necessary materials prior to starting the teaching and outlining methods whereby students may assist in gathering them is an important phase of unit planning. Without necessary materials and through inadequate utilization of school and community resources, many learning activities fail to achieve their expectancy.

The teacher who limits activities to those which can be carried out with materials available in the classroom often eliminates some which are most worth while. Imagination and resourcefulness in supplementing classroom materials with those available in the school and the community pay good dividends. Planning in advance to take the class into the community or into other school areas such as the library is generally good practice. It is probably safe to conclude that the teacher who secures materials in advance, plans procedures for students to assist in obtaining others, and works out details for effective use of all types will have most success in attaining objectives.

EVALUATION PROCEDURES

Evaluation procedures are planned to measure the extent to which objectives are achieved and to appraise the value of the learning experiences to the students. We may look at evaluation in this way: (1) Objectives are formulated; (2) activities to achieve these objectives are organized; (3) necessary materials and resources are secured to make the activities meaningful; (4) kinds of student behaviors which indicate growth in understandings, skills, and attitudes are identified; (5) instruments such as written tests, informal procedures such as ratings

based on observation and conferences, and student self-appraisal techniques are utilized to secure data concerning student growth; (6) these data are analyzed. Analysis of data leads to an understanding of strengths and weaknesses of individual learners, the extent to which the objectives are achieved, the degree to which the various activities are effective, and the extent to which the group profited from engaging in the activities.

In this frame of reference, evaluation is an integral part of the teaching and is a continuous process. In planning, evaluation begins in the attempt to identify and express valid objectives. In teaching, it begins in the attempt to discover where students are now. The primary purpose in evaluation thereafter is to facilitate the students' learning, to identify more valid objectives, to discover how to organize more worthwhile activities, and to assist students to gain greater mastery in self-analysis and self-direction. Evaluation of this type is sufficiently comprehensive to provide a basis for marking. Marking may be on an individual or a comparative basis, whichever the specific situation demands.

A more detailed treatment of evaluation procedures is presented in Chapter 15.

DAILY LESSON PLANNING

After a unit has been organized, the need for daily planning still exists, but it is now in proper focus. There is no need for outlining a series of daily guides far into the future when a unit has already been planned. Rather, daily plans are organized to fit into the unit and are essential for carrying out the details of the unit. The major purposes in daily planning are to insure that routine is handled efficiently, to outline methods and activities for the day, to insure that needed materials are available and ready for use, and to approximate time use. In the unit, approximate length of time to carry out activities is estimated. Such time use is purposefully flexible so that the preplanning does not establish inflexible time barriers which cut short or prolong a particular learning activity. Daily planning provides the flexibility necessary to adjust activities to the learners' rates and supplies the details necessary to achieve the objectives of the unit.

FRAMEWORK FOR A DAILY PLAN

Class Date

Major objectives for the day:

Activities in progress or problems under investigation:

| Anticipated Time Use | Activity | Teacher's Participation | Student Participation |
|-------------------------|------------------------------|----------------------------|--------------------------|
| | Routine | | |
| | Initiatory activities | | |
| | Major activities | | |
| | Summarizing activities | | |
| | Planning for the next day | | |

 Outline of materials including subject-matter understandings and related skills:

Evaluation:

The general procedures outlined in unit planning are also followed in daily planning except that daily plans include more details.

HANDLING OF ROUTINE

Many class periods begin with caring for routine details. Most teachers are concerned with taking roll and reporting attendance, managing the physical aspects of the room such as light, ventilation, heat, and seating arrangement, securing needed materials from storage spaces, and taking care of announcements and other administrative details. Two important considerations are immediately apparent in managing these routine affairs: first, how time may be utilized most efficiently, and second, how student participation in routine may become a worth-while learning experience. Both of these are important, for when the teacher takes from three to ten minutes at the beginning of the period caring for routine, adolescents do not come into the classroom, sit quietly, and do nothing. Usually they visit with one another. The longer the teacher takes without providing activity for them, the louder they become. Many beginning teachers lose the class for the whole period by not planning routine carefully.

Experienced teachers allocate routine duties to various members of the class, using as many members as possible. When students know that they are responsible for these duties, they appear in the classroom prior to the ringing of the bell and have materials and supplies ready and other details completed. The teacher is free to greet students pleasantly, to supervise the activities of those caring for routine, and to set the tone of interaction for students not concerned with routine.

Here are some questions which you may consider in daily planning of routine and class-management procedures:

1. What activities can most effectively be routinized?
2. How can noise and confusion be avoided?
3. How can routine be managed so that students learn individual and group responsibility?
4. How can routine be organized so that minimum amount of time produces maximum value?
5. What aspects of routine and management can best be handled by the teacher without student participation?

The particular methods which will be used need careful attention in daily planning. Suppose you want students to assume responsibility for (1) checking the ventilation and lighting, (2) reporting attendance, (3) securing materials from storage spaces, (4) caring for live plants or animals in the room, (5) passing in written work, (6) keeping materials in good order, and (7) keeping the room tidy and neat. What methods will you use to get students to manage these details efficiently so that you have more time for other things?

GETTING STARTED

In daily planning, be specific in outlining the questions you will use, the review of previous activities you will make or the questions to elicit student review, the suggestions you will give, and the method for utilizing blackboard and other illustrative materials and supplies. One frequent criticism of secondary teachers made by students is that questions asked or suggestions made are not readily understandable. In framing the oral part of the daily plan, select your terminology as carefully as you do in writing a business letter. The major task in getting off to a good start is to present an idea, question, material, or demonstration which attracts the attention of the whole group and which initiates mental activity on the part of each learner.

Some things teachers do to initiate mental activity are calling attention to a prominent display or material; asking a question beginning with "how" or "why" which cannot be answered in one or two words; outlining major ideas on the board to be examined by the students; reading a very short, highly interesting report related to class activity; and conducting a short, quick-moving summary of previous activities.

MAJOR ACTIVITIES

Outline the major activities in which you and the students will engage. As in the unit, these activities are selected and organized to build understandings, skills, and attitudes. The methods utilized in directing activities should be pointed toward assisting the learners to establish clearer understandings, higher levels of skills, and desirable attitudes.

At this point be specific in analysis of practice procedures. Whether the practice be highly specific, as in typing, moderately specific, as in developing skill in problem solving, or generalized, as in developing

skill in group discussion, consider the following questions in framing methods for this part of the day's activities: (1) Do the students feel a need for this practice? (2) Do they have a general understanding of the whole process? (3) Is provision made whereby errors and inappropriate form will be detected and eliminated? (4) Do the methods, including length of time used in practice, provide for individual differences present among the group? (5) What part of the period can be used in practice most efficiently? (7) What student behaviors will be looked for which indicate fatigue or boredom?

SUMMARIZING ACTIVITIES AND PLANNING FOR THE NEXT DAY

These two steps are one when the daily plans are organized as part of a cohesive unit. A summary for this day should lead into what will be accomplished tomorrow. Summaries are important. Previously, in analyzing transfer, we discovered that generalizations are retained for longer periods of time than are facts, and that a primary task of the teacher is to help learners discover applications of newly built generalizations. Summarizing activities in the form of teacher-led discussion or student evaluation of the day's work are useful for this purpose.

Each student needs to know what comes next, why it should be done, and what he may do in preparation for the subsequent day's activities. For many years we have been calling this the assignment. As assignments have usually been interpreted, they mean teacher-stated directions. Further, because the assignment is to be clear, specific, and easily understood, teachers are prone to make rushed assignments in the following ways: "Each of you work out the odd-numbered problems in your text, pages 67 and 68, and hand them in at the beginning of the class tomorrow." "Tomorrow we will discuss civil service in our state so read pages 138 to 150 in your text, which outlines our system." "Tomorrow we will review for the monthly test; each of you bring to class twelve questions, two from each of the six chapters we have now finished. Make these questions the kind that can be answered in one or two words."

Three generalizations to guide planning activities for subsequent days may be stated thus: First, when individuals share in planning what to do, they put forth greater effort in carrying out their plans; second, an

identical assignment for all members of a class is usually too difficult for those with lesser achievement and aptitude or too easy for those with higher achievement and aptitude; and third, each student needs to know what comes next and how it will be accomplished. Regardless of additional time needed in the daily planning, careful consideration given to the part you and the students will take in planning subsequent activities pays large dividends.

OUTLINE OF MATERIALS

Having needed materials and supplies available and in readiness for use is an important part of daily planning. For materials such as pencils, paper, newspapers, magazines, and books there must be a clear indication of which are to be furnished by the students and which by the teacher. Jotting down a list of all materials needed a day in advance and then checking to be sure that they are ready for use prior to commencing the class is a time-saving procedure. When students are to furnish materials, the necessary directions to assure their bringing them to class should be outlined.

Effectiveness of many teacher demonstrations is lost because at a crucial moment, when a climax of interest should be reached, a needed material is missing; securing the necessary detail diverts attention from the demonstration. Science teachers generally agree that every demonstration to be used in the classroom should have been carried out previously by the teacher and that the comments which the teacher uses during the demonstration should be carefully outlined. This generalization holds for all other types of demonstrations. Sound films, radio dramatizations, and theatricals hold attention because of the great amount of skilled effort put into planning the materials and ideas which attract attention and hold it to a climactic point.

Subject matter also needs outlining. First of all, an outline should include the important concepts and skills so that major aspects are not neglected. It should be in the form and sequence in which it will be analyzed by the students. That is, the ideas should be arranged in the order which is most meaningful to the learners, and vocabulary should be carefully chosen so that the learners understand. Generally, it is far better to pitch the vocabulary at the lower group so that all understand

it. In any subject where new terminology is a necessary part of developing understandings and skills, methods should be set up whereby the new words are examined by the students prior to the teacher's using them at usual rate of speaking.

TIMING THE LESSON

The amount of time in the instructional period constitutes the limits within which learning will occur for this day in this classroom. How can the time be used most efficiently? It is most efficiently used when each daily plan fits into a unit and when the students are engaging in activities which last over a period of time. When students begin an activity in which they are interested and which is only partially completed, they want to return it. Further, when a daily plan fits into a unit, the greater length of time allows for more flexible time use; the bell ending the period does not end the learning experience. When each daily plan is to incorporate a complete learning experience in itself, planning use of time is extremely difficult. Undoubtedly, this is one reason lectures are used so widely. A teacher can time a lecture better than a general discussion or other types of activities in which students actively participate. The more actively students engage in activities, the harder it is to plan time usage on a daily basis. Experienced teachers find it most difficult to get timing perfect; very frequently they use the latter part of a period in individualized instruction, some form of preparation for the next day's activities, or a summary of this day's work.

At this point, return to the Framework for the Daily Plan. Note that space is allotted for anticipated time use. This is not to bind yourself with inflexible time barriers but rather to serve as a check in preplanning to discover how much of the period will be utilized actively by the teacher in a dominant role and how much by the students. In setting down proposed time, activity, and the participation by you and the students, add the total amount in which you explain, lecture, read, ask questions, or demonstrate to the whole class and the total amount in which the students lead in various activities. Thus, if you propose to lecture for forty minutes, put in "lecture" under teacher participation and "listen" or "take notes" under student participation. Do this for

routine and all other activities for the day. Be sure to indicate what the students do as well as your own role. Frequently experienced teachers check anticipated time use with actual use and find that they are much more active and the students less so than was anticipated.

EVALUATION

Evaluation in daily planning follows the procedures outlined for unit planning except that it is more specific. When planning a unit, a method for assisting students in measuring their own progress may have been outlined briefly. In daily planning, the method is treated in detail. In the unit, a multiple-choice test may have been constructed to appraise degree of understanding. In daily planning, the specific instructions for administering the test, including passing out the test copies, directions for answering questions, exact procedure concerning extent to which students will be assisted, amount of time allowed for completion after the first student finishes, method for scoring when students assist in scoring, and procedures for returning test copies and answer sheets are considered.

One frequently overlooked phase of evaluation in daily planning is to provide an analysis of strengths and weaknesses of this day's teaching. Teachers often do this mentally but do not make any written statements. When such practice is followed, a record of many effective teaching procedures is lost and some poor practices are repeated. Keeping a log of daily evaluations is profitable for the beginning teacher. A loose-leaf notebook which contains daily lesson plans and provides space for making daily evaluations serves excellently as a mechanical arrangement. When evaluations of daily procedures are thus kept, they serve to provide a cumulative record of how the unit progresses.

At this point you are probably thinking: "How can I plan for a semester, then several units to be carried out during a semester, and finally a series of daily plans?" One way to approach the problem is to set up your overall plan first; second, outline the first unit prior to starting teaching; and third, organize the lesson plans for the first week. Organize subsequent units and daily plans as you proceed in teaching. The job is time consuming, but it pays rich dividends. Once you have

built up a group of units and have discovered student activities and teaching procedures which work best for you, time will be available to supplement the units and to experiment with new methods.

SUMMARY

Preplanning is necessary to guide the teacher and students in starting learning activities and in carrying them to successful completion. The first phase necessitates defining objectives to be achieved, determining a sequence of units or problems to be solved, and locating major sources of materials and school-community resources. This phase of planning is carried out to insure maximum continuity of learning experiences for the entire length of time the teacher has a group of students.

The next step is to organize the units in more detail so that objectives are expressed as specific student understandings, skills, and attitudes. Sequential activities, involving both student and teacher participation, are outlined in a framework of initiatory, developmental, and culminating activities. Materials needed to make these activities meaningful and worth while are located, and methods for their use and for direction of student activities are planned. Procedures are outlined for appraising the extent to which the objectives are achieved.

Daily planning incorporates the specific details needed to carry out units. The major purposes in daily planning are to assure that the classroom will be managed well, to outline specific methods for the day's activities, to insure that needed materials are available and ready for use, and to utilize time efficiently. Daily planning provides the necessary flexibility to carry out units most effectively.

QUESTIONS AND ACTIVITIES

-
1. What is meant by overall planning? Organize an overall plan for one semester in a subject field in which you are interested.
 2. What are the main characteristics of a teaching unit? Organize a teaching unit related to your area of interests.
 3. What are the major characteristics of a resource unit? Organize a resource unit.

4. In what aspects of class activities should students share in planning?
5. List the major understandings, skills, and attitudes which you have developed thus far in this class. List the activities in which you have engaged to achieve them.
6. What are the major purposes to be achieved by students through engaging in initiatory, developmental, and culminating activities?
7. Make a list of the materials and resources needed to make learning activities most meaningful in a course you plan to teach or in a college course you are taking.
8. How is evaluation related to teaching? What are the major reasons for outlining evaluation procedures while planning a unit?
9. How does daily planning differ from an overall plan? From a unit plan?
10. Make a lesson plan for the first day you meet a given class.
11. Outline the procedures which you deem feasible for managing routine.
12. What kind of records should teachers keep concerning how the learning activities proceed from day to day?
13. Evaluate the suggestion given in the chapter that the teacher should organize an overall plan, a first unit, and one or two daily plans prior to meeting the class for the first time.
14. Describe any teaching situation in which you think it is feasible for the teacher to go to class without setting down any plans in written form.

REFERENCES

- Alberty, Harold B., *Reorganizing the High School Curriculum*, New York, The Macmillan Company, 1947, Chaps. 9, 10, 11.
- Commission on the Social Studies Curriculum, *The Social Studies Curriculum, Fourteenth Yearbook of the Department of Superintendence*, Washington, National Education Association, 1936, Chap. 9.
- Douglass, Harl R., and Mills, Hubert H., *Teaching in High School*, New York, The Ronald Press Company, 1948, Chap. 7.
- Goetting, Martin L., *Teaching in the Secondary School*, New York, Prentice-Hall, Inc. 1942, Chap. 11.
- Jones, Arthur J. Grizzell, Emit D., and Grinstead, Wren, *Principles of Unit Construction*, New York, McGraw-Hill Book Company, 1939.

- Krug, Edward A., *Curriculum Planning*, New York, Harper & Brothers, 1950, Chap. 5.
- Quillen, I. James, *Using a Resource Unit*, Washington, National Association of Secondary School Principals and National Council for Social Studies, 1942.
- Quillen, I. James, and Hanna, Lavone A., *Education for Social Competence*, Chicago, Scott, Foresman and Company, 1948, Chaps. 7, 8, Appendices I, II.
- Rivlin, Harry N., *Teaching Adolescents in Secondary Schools*, New York, Appleton-Century-Crofts, Inc., 1948, Chap. 6.
- Strickland, Ruth G., *How to Build a Unit of Work*, Washington, United States Office of Education, 1946, Bulletin No. 5.

CHAPTER 7

Organizing and Directing Initiatory Activities

The first step in carrying out a plan during actual teaching is the initiation or introduction. It is necessary whether preplanning has been done on a daily, unit, or semester basis and whether the planning has incorporated understandings, skills, and attitudes in a single subject, a broad field, or a core course. A unit in trigonometry or advanced orchestra needs an effective introduction, as does one in seventh-grade arithmetic or in problems of family living. A good initial learning situation can aid the most efficient and advanced learners as much as or more than it can the slower or more immature group. A high degree of leadership, positive control of learning activities, and enthusiasm are required at the beginning because initiatory activities are to be organized and directed by the teacher so that students (1) focus attention toward the teacher and the proposed outcomes, (2) examine objectives and define those which will be pursued, (3) develop procedures for engaging in and carrying out subsequent activities, and (4) establish group objectives and individual objectives. By engaging in activities to achieve these purposes, students discover values which may be derived from their work and secure an overview of what will follow. They must actively participate in the teaching-learning situation if these purposes are to be achieved. Neither the students nor the teacher should dominate the activities. The teacher should exercise effective democratic leadership in carrying out already made plans and in making decisions as actual teaching commences. In the discussion which follows, initiatory activities which are organized to achieve these purposes are discussed as coöperative student-teacher activities.

During the introductory phase, the teacher also wants (1) to learn to know each student as an individual, (2) to discover characteristics of the group, and (3) to establish a good emotional atmosphere in the classroom. Achieving these purposes requires considerable work by the teacher and involves relatively little active participation on the part of the students. For the most part, the teacher does these things while the students are actively engaged in work activities. Initiatory activities to achieve these ends are treated as teacher-oriented activities.

In the discussion which follows, numerous examples of initiatory activities related to different areas and grade levels of teaching are outlined. Related to each purpose of initiatory activities, a Miss Nelson who might be teaching a group of tenth-grade students English in almost any senior high school will supply snapshot views of effective procedures which might be followed in many different situations. This course of action provides an outline of continuous and sequential initiatory activities during a two-week period.¹

COÖPERATIVE STUDENT-TEACHER ACTIVITIES

A brief inspection of the above purposes indicates that a considerable amount of time is necessary to achieve them, especially with a new group of students; also, initiatory activities should be organized to achieve several purposes simultaneously. The methods of instruction, the selection and use of materials, and the activities of the students, such as listening, observing, reading, and participating in use of materials and planning, need to be directed so that students grasp the meaning of what they are doing from the start. If each student is to accomplish this, the first job of the teacher is to attract and hold the attention of the entire class.

FOCUSING ATTENTION

Earlier we found that using concrete materials and familiar and simple activities was one way to arouse interest in a learning activity. Examining the process by which mental activity is aroused reveals that as more sensory perceptions are involved, the likelihood of attracting

¹ The author is indebted to Miss Elizabeth Carney, Associate Professor of English and Supervisor of English Teaching, Colorado State College of Education Laboratory School, for critical examination of the unit in tenth-grade English.

and holding the attention of members of the class increases. Further, if attention is to be attracted toward a particular person, object, or idea through presenting certain stimuli, then competing stimuli should be avoided. The physical arrangement of the classroom must be planned so that it produces optimum mental arousal related to the proposed work and so that competing stimuli are avoided.

Students come into Miss Nelson's tenth-grade English classroom in a senior high school for the first time. They observe a large bulletin board, artistically dressed, with student-made cartoons, magazine clippings, and book covers under a caption: "Let's Get Acquainted." They see a well-groomed, friendly adult standing near the entrance who greets them pleasantly. A bell rings signifying that class has begun.

The students note that their seats are arranged in one large circle with Miss Nelson's desk in one corner and her chair as part of the circle but set off slightly from the two adjacent ones to give her freedom in using the blackboard and other materials. Miss Nelson asks each student to be seated and each wonders why the seats have been so arranged. Miss Nelson wants to provide the best mechanical arrangement for focusing attention toward her with least competition from other stimuli. Knowing the nature of adolescent boys and girls, she realizes that major competing stimuli are the adolescents themselves. In introducing the work, she wants the students to share common experiences and knows that such is possible only if all students are attentive. Will they give more attention seated thus?

In this arrangement, Miss Nelson sees each student, each student sees her, and each student sees every other student. When she talks, or when a student volunteers information or a question, every person in the circle with minimum amount of inconvenience can direct his attention to the speaker and cannot avoid doing so graciously. Further, the teacher is able to see not only the head movement of each student but also arm and leg movement. Such movement is also visible to every other class member. This arrangement eliminates many competing stimuli which operate when students sit in rows or around tables, has a tendency to put each student on his best behavior, and directs his attention toward the teacher. Whatever the furniture or seating arrangement in a particular room, it is wise to arrange it for initiatory

activities involving teacher-led discussion or demonstration in such manner that there is greatest opportunity for attention to be directed toward the teacher and least opportunity for students to become engrossed in one another.

Now that the room is arranged to provide maximum opportunity for visual stimulation related to the unit, what is done to provide further impetus for focusing attention? A variety of procedures may be followed, and the particular use of materials and methods depends upon the nature of the learning.

After each student has introduced himself, Miss Nelson indicates that this is a class in which the students will learn to express their ideas more accurately in oral and written form. Then she tells the class that a previous group made a recording which summarized what they had done during the semester and how they had gone about their work. She asks the class to listen to see if they recognize any of their friends. As the record is played, it becomes apparent that the previous class worked on problems and projects dealing with making friends, improving reading skills and using the library, discussing in small groups, speaking individually, and writing. In the few minutes remaining after the record, Miss Nelson leads a class discussion about it.

Other kinds of activities may be used to good advantage to focus attention toward the teacher and proposed outcomes. Here are four which indicate the variety.

In science classes, demonstrating a scientific experiment which deals with materials in the students' environment captures attention. One such experiment is to demonstrate chemical and filtration methods for purifying water; separation of water into elements is extremely interesting for most students.

In typing and other classes which are mainly set up for establishing perceptual motor skills, bringing into the classroom four or five student typists who have developed a relatively high level of skill and good form serves to gain and hold attention. The teacher is free to interrupt the typing to question the students concerning their methods and to point out good form and correct procedures as they occur.

One initiatory activity which worked well in a geometry class was to have students who had finished the course bring into this class ma-

materials which they had produced—geometric designs on paper and cloth for household decoration, a layout of the front view of a home, and a model playground. Methods for making these were explained by students, and others conducted a brief, informal discussion of why they were interested in continuing their study of mathematics.

In introducing equations in algebra, the teacher brought into the classroom a balancing-type scale and blocks to acquaint the students with and interest them in the concept of equations. The blocks and scale were used to illustrate how subtracting or adding equal numbers of blocks to both sides is necessary to maintain equality.

Initiatory activities like these appeal to both vision and hearing, utilize materials and resources which possess elements of concreteness and familiarity, are sufficiently simple to be understood, and are presented in such context that they are meaningful to learners at this stage. The students thus aroused and attentive are ready to examine and define objectives which will be pursued.

FORMULATING GROUP OBJECTIVES

In preplanning, the teacher on the basis of best judgment identified and expressed objectives which were socially valid and suited to the developmental levels of the learners. The statement of proposed objectives included understandings, skills, and attitudes to be developed by the students and indicated kinds of activities necessary to achieve them. At this point in initiating a unit of work the teacher objectives need to be examined in relation to students' purposes. It is the responsibility of the teacher to assist students to discover objectives which they currently hold and others which they may not have identified up to this time. As previously expressed in purposes of initiatory activities, assisting students in this process also helps them discover values which may be derived from engaging in activities and helps them secure an overview of the unit or course.

What methods are used to direct the students' attention to this phase of initiating a unit or class? Again return to the arrangement of the room and to the idea that during this phase activities are to be shared by the whole class. An initiatory activity useful for getting student objectives is teacher-led informal discussion. In an informal discussion

arising from a question directed to the group, the outcomes depend largely upon how much information the group already has about the class, their attitudes toward previous related classes, the previous experiences of this group in discussing ideas with teachers, and the emotional atmosphere already established in the classroom. The informal nature of the discussion and the fact that all members of the class have opportunity for expressing ideas should lead to a sharing of objectives, including those proposed by the teacher.

Miss Nelson, seated in a circle with the class, introduced the discussion of objectives at the second meeting of her class in this manner: "Yesterday we heard a recording made by a group of tenth-grade students. These students discussed interesting things they did during their first semester in tenth-grade English and also told us how they had gone about some of the work. You recognized the voices of some of your friends.

"After listening to the record, we had a few minutes left to become better acquainted, and I was pleased to notice that you had many questions about how the students went about their work and how they were able to make such a good recording. I want to begin our work today by giving you a problem to solve. Every boy and girl in this school and in this state takes English in the tenth grade. Why do you suppose English is required in the tenth grade? What can be gained from taking English?"

Students made suggestions, some of which follow:

1. To learn to know my classmates.
2. To learn how to make friends.
3. To get along better in other subjects.
4. To learn how to give reports without being embarrassed.
5. To learn to follow written directions.
6. To learn to talk to others without becoming angry or upset.
7. To learn to write correctly.
8. To get the English I need to go to the university.
9. To learn to read my textbooks better.
10. To learn to read faster.
11. To learn punctuation and spelling to become a stenographer.

12. To learn the spelling and writing I need to become a railway clerk.

Before the suggestions were volunteered, Miss Nelson chose a student to list them on the board so that they were readily available for further discussion and summary. After all suggestions were drawn from the group and discussed, Miss Nelson presented others for student consideration.

Her next step was to assist the class in analyzing the objectives in more detail and in systematizing them. Miss Nelson took responsibility for grouping objectives into four major categories: making and getting along with friends, reading, speaking, and writing. She might have provided the students excellent opportunity for developing initial ability in systematizing their study; however, she had preplanned four units and wanted to make sure that the objectives were grouped according to the pattern she had organized so that major emphasis in each unit would be directed toward a specific area of understandings and skills.

After this step had been completed, she made an assignment: "We now have on the board a list which includes all our suggestions. Each of you please pick out those which you think are most important and write them on a piece of paper. Hand it in after you have finished, and I shall return it tomorrow so that you may keep it in your notebook. We shall refer to it later when we decide more definitely what we shall do for the next few weeks."

A second method for assisting students to define objectives is to outline to the whole group some of the more important in interesting anecdotes telling how students and adults use understandings and skills in their daily activities. After this first step has been completed, the task is to make sure that the students accept these objectives as their own. This may take the form of an assignment to be completed outside the class, in which the students are asked to find out from friends and parents what they have gained from studying English. The suggestions are brought to class. The procedure employed for using these suggestions follows that outlined previously for conducting informal class discussion. It may begin as a whole class discussion with the class dividing

into smaller groups later in the period on the basis of interest or friendship.

A third method for assisting students to identify objectives is to construct and administer a questionnaire or check list, each item presenting an objective of the unit. Items in a questionnaire to be marked "Often," "Sometimes," or "Never" may include the following:

1. When you are explaining something to your classmates, do they understand what you have to say?
2. Do you have difficulty in following written directions?
3. Do you like to get before your classmates and tell them about something interesting, such as a film you saw?
4. Do you sit quietly and listen carefully, without interrupting, when a classmate presents an idea with which you disagree?
5. Do you read newspapers, magazines, and books in our library?
6. Do you have papers returned which have many errors in spelling and punctuation?
7. Do you use any library other than ours at school?
8. Are you embarrassed for lack of the "right" thing to say in class?
9. Do you converse easily with acquaintances outside of class?

A check list in which each student ranks items according to where he thinks he needs most help may include:

1. Reading more rapidly.
2. Following written directions more accurately.
3. Using the library to find information or interesting reading materials.
4. Writing papers more accurately.
5. Spelling with fewer errors.
6. Using words to express ideas more clearly.
7. Talking to the class.
8. Discussing differences of opinion without getting angry.

Another procedure is to administer teacher-made or standardized diagnostic tests. The teacher makes clear to the students that their test scores will not be used for assigning marks in the course. After the test administration, a teacher-led discussion of results is necessary so that correct interpretations are made by the students. Test results may be used as the means for directing attention to objectives. So that all

students profit most from the test administration, an exchange of ideas and also discussion of more specific outcomes is valuable.

These methods for assisting students to define objectives are appropriate in many teaching situations. When most of the students are interested in school work generally and in a particular course, these procedures have a tendency to build interest among those students who have not taken school work very seriously.

Defining objectives thus at the beginning of a course is not sufficiently specific to serve as the basis for student self-evaluation. Usually this comes later and is undertaken as more definite work to achieve the objectives is under way.

DEVELOPING PROCEDURES FOR ENGAGING IN AND CARRYING OUT ACTIVITIES

In preplanning, the teacher outlined developmental and culminating activities. These now need to be considered in relation to what has transpired thus far in initiating the unit. If the proposed objectives correlated closely with the outcomes of class discussion and if the proposed activities are deemed feasible, the major responsibility for the teacher lies in assisting students to analyze these activities and develop work procedures for carrying them to completion.

Methods similar to those previously outlined for teacher-student consideration of objectives may be employed in coöperative planning of activities. It is at this stage in initiating a unit that definite plans are formulated for getting started and preliminary plans are made for carrying work to completion. The nature of the objectives in part determines the extent to which students participate in deciding major activities. If a major objective is to develop skill in shorthand or music performance, the students and teacher will spend relatively little time in discussing major activities. If the objective is to survey community resources for wise use of leisure time, a considerable amount of teacher-student planning is necessary to make the work meaningful and worthwhile. Students will exercise relatively little responsibility and initiative for planning activities in a beginning swimming class; in an eleventh-grade core course dealing with problem areas in American life, they may assume almost complete responsibility in planning their work.

One method for carrying out this phase in initiating a unit is to present to the students a fairly complete guide of activities and procedures with specific directions and time allotments for completion of various assignments, problems, or projects. A mimeographed guide is frequently organized during the preplanning and usually includes a statement of proposed objectives. When this procedure is followed, students share in defining objectives and planning activities to a very limited extent. In presenting the written guide, the teacher explains how the unit is organized and discusses the objectives, procedures, and activities which have been outlined. After this discussion it is advisable to provide opportunity for students to suggest work procedures and activities. When better solutions are proposed, they should be discussed and incorporated in the guide. It is imperative that the students examine the guide carefully so that they know how to proceed and so that they accept the guide as one which they want to follow.

A second method for sharing responsibilities of planning with students is to state a problem and then draw from the students methods for solution. Mr. Young, teaching a class in general science in which most students come from an irrigated farm region, discussed various problems of conservation of resources with the class. In the discussion, students showed awareness of and interest in the water supply, erosion of soil by wind, and effects of temperature variations. This led to a more general problem, "How does climate affect our daily living?" As a guide for directing the discussion, Mr. Young took his cues for subsequent questions from the steps in scientific problem solving:

1. What is the problem? Mr. Young asked such questions as: What do we mean by climate? How do amount of rainfall, direction of wind, temperature, etc., affect what we do and how we live?
2. What do we know about this problem already?
3. What kinds of information do we need and where may it be obtained? At this point, Mr. Young pointed out how textbook and reference materials, experiments and demonstrations, newspaper reports, and weather bureau information might be used.
4. How can we get this information recorded so that it may be analyzed? Here specific procedures for keeping charts, making graphs, weather map, etc., were introduced.
5. What kinds of conclusions are we looking for? This question led

to a discussion of the scope of the activities. Mr. Young considered it his responsibility to help decide that it would include effect of climate on farming, type of clothing worn, type of housing, cost of fuel, source of water supply, kind of recreation available, and vitality.

6. How can we test our conclusions? Students suggested that it would be necessary to compare our living conditions and climate with those of some other region; students who had lived in other regions of the country volunteered to get information about these sections.

7. How can we apply our conclusions? Mr. Young led students to discover applications with the question: How can we control climate or manage living arrangement to capitalize on the climate to a higher degree?

A third method for sharing planning with students is to outline the broad aspects of a project in which the whole class participates or a number of projects to be carried out by committees. Miss Nelson, the English teacher, introduced a project thus: "Yesterday we discussed some of the things to be gained from studying English. We decided that since we were new to the school, we should begin by studying how to make friends and get along better with people. Some of you were concerned about learning to know your classmates; four of the girls said they were mainly interested in learning how to refuse dates without offending the fellows. Others wanted to know how to make introductions properly; two students told me after class that they had trouble in getting a conversation started when parents or teachers were part of the group. Two or three students suggested that they get into trouble frequently at home about using the phone. Here we have a whole group of problems which deal with ability to say the right things well at the proper time. Other tenth-graders have many of these same problems; so we are going to do something about helping ourselves and others.

"After our class meeting, I saw the principal and he invited us to present a program at the next assembly on October 13—four weeks from now. How can we arrange an assembly program to help other boys and girls get acquainted and learn to get along better with others?"

Students volunteered their ideas and Miss Nelson made recommendations. As a result of the discussion, a plan of attack was outlined with the class divided into committees on the basis of interest:

The telephone usage committee decided to find out recommended

procedures for using a telephone and to write their recommended procedures. The chairman of this committee was to act as master of ceremonies for the assembly.

The introductions committee was to find recommended procedures for making introductions, to dramatize the findings, to act as greeters to all students coming to the assembly, and to distribute a mimeographed sheet, "Tips for Making Friends," at the assembly.

The dating committee was to dramatize correct procedures in asking for a date, accepting an invitation, refusing graciously, and making arrangements with parents concerning finances and time. Also, this committee was to find accepted techniques for getting seats at a movie and exchanging dances, and proper dating manners for boys and girls.

The conversation committee was to discover how to enter into a conversation and what the characteristics of a good listener and of a good leader in conversations are. Its findings were to be dramatized at the assembly, and recommended procedures in written form were to be outlined.

The cartoon committee was to make humorous cartoons depicting some of the most important situations clarified by the other groups and to display and explain these cartoons at the assembly.

Getting information was the first problem to be undertaken by all groups. Miss Nelson suggested chapters in the text which dealt with making friends, writing, and speaking, and also recommended materials in the library. After forming committees and making plans in committees, the whole class went to the library to find the materials Miss Nelson had suggested and others which they might use.

When the committees returned to discuss findings and procedures, Miss Nelson found that the students were unnecessarily noisy; so again she led a whole class discussion in which she asked the students to state what rules were necessary to guide their conduct in committee meetings, in the classroom and elsewhere. The suggestions were put on the blackboard; each student copied the list, and it was decided that each chairman would assume responsibility for his group's actions. A short period was set aside for further discussion of this problem during the next week.

In examining the unit of work undertaken in Miss Nelson's class, we

discover that the major emphasis is directed toward making friends; however, the students are going to develop skill in reading, speaking, writing, using the library, and conducting themselves in an orderly manner in the classroom and in committee meetings. Miss Nelson knew that starting the course in this manner was a good way to help students feel a need for making a more formal study of written and oral expression, which will come in later units. Further, Miss Nelson did not teach English skills for the purpose of learning English as such but as tools for more effective speaking, listening, writing, and living with one another.

These three methods suggest a variety of procedures for sharing the planning of activities with students; the major purpose is to assist the learner to discover how he is going to get started in work which he wants to carry to successful completion.

FORMULATING INDIVIDUAL OBJECTIVES

Regardless of the degree of responsibility and initiative students assume for planning activities, whether they suggest activities or accept the teacher's proposals, it is important that the teacher provide opportunity for them to establish group objectives and for each to establish individual objectives related to the unit. Assisting students to establish realistic objectives and to set up standards by which to judge their own performance is one of the most difficult problems a teacher faces; yet it is most rewarding because it serves to guide subsequent student conduct in the classroom and execution of activities. How students behave and what they do depends upon how strongly the objectives are desired, how clearly methods of appropriate attack are understood, and how important the objectives are to the individual.

In those classes where individual and group projects constitute major activities, as in home economics, shop, agriculture, and art, and in those where degree of skill is readily measured, as in typing, shorthand, and to a lesser degree music and science, assisting each student to establish realistic objectives is not so difficult as in other courses. In a typing class, for example, a more immediate objective is to learn the keyboard in six weeks, an objective less immediate is to type at twenty words per minute within four months, and a deferred objective is to type at forty-

five words per minute at the end of the year—sufficiently well to secure employment as a typist during the summer vacation. To assist students in formulating individual objectives the teacher may demonstrate varying rates of typing, point out what previous students have done at different intervals, and have students discover requirements that employers have set.

As English, social studies, mathematics, and foreign language classes are frequently taught, formulating individual objectives is extremely difficult for students. Perhaps the most ineffective procedure is for the teacher to set the same objective for all students in the form of a number of pages to be read or textbook problems to be solved. A close second is to use marks, with the teacher doing all the evaluating and marking on the basis of comparative achievement. Both of these procedures are ineffective because the objectives—completing the reading of a certain number of pages and working to receive a high mark—are too artificial for many students and are not accepted by a large portion of the class. However, some students in almost every class will accept either. Those with higher ability who come from homes where going to college has high social value or where parents reward for high marks, consistent effort, and good conduct are perfectly willing to read assigned pages and to strive for high marks. Most students will read and work textbook problems when the teacher assists them to discover that doing so enables them (1) to solve a larger problem with which they are concerned, (2) to complete a project, (3) to understand a process, (4) to develop a skill, or (5) to secure social approval.

Now let us return to Miss Nelson's class in tenth-grade English again and fill in more details to discover a method for helping students establish individual objectives. After taking care of introductions and routine on the first day, the students listened to and discussed a recording made by a former class. On the second day they discovered what could be gained from taking English. Next they decided to take up the problem of how to make friends and established more specific objectives. Then they divided into committees and outlined methods for presenting dramatizations and other materials at a whole-school assembly—a group goal or objective.

To help students establish individual objectives, Miss Nelson pro-

ceeded in the second week by supervising the committees closely to make sure that each group understood what they were going to do and how they were going to do it. When the committees were clear on procedures and had found necessary materials, she asked one committee at a time to meet around her desk to discuss the list of general objectives which had been outlined, the more specific objectives for the unit on making friends, and progress on work under way. After discussion, each student was asked to express in writing those things on which he was working which were most important to him and on which he, other committee members, and the teacher might keep a record of progress for the next weeks. Miss Nelson used about half of each daily class period for this part of the work. She found that some students had not established a clear relationship between what they were doing now, the assembly program, and improvement in reading, writing, and speaking; so she used a short period during each daily class period to help these individuals. When this phase was completed, a class period was used for a general discussion to outline what each group was doing in relation to the assembly program and to check progress individuals were making. By this time committee members were ready to help one another in analyzing individual and group progress—to assist each other in setting up standards of performance. Thus each student established individual objectives.

In following Miss Nelson thus far, you may be greatly concerned about the amount of time used to assist the students in focusing attention toward her and the proposed outcomes, examining and defining objectives, planning activities and procedures, and establishing individual objectives. Recall that this course is required of all students and that Miss Nelson met them for the first time. Two weeks spent thus at the beginning of a school term is not excessive for making a good start.

TEACHER-ORIENTED ACTIVITIES

Thus far we have dealt almost exclusively with aspects of the teaching-learning situation in which the students and teacher have shared about equally from the standpoint of participation. Now the teacher wants to turn to other equally important purposes of initiatory ac-

tivities: learning to know each student as an individual, discovering characteristics of the group, and building a good emotional atmosphere in the classroom. These call for activities in which the teacher uses time both in and out of class to make a most effective start with the class.

LEARNING TO KNOW EACH STUDENT AS AN INDIVIDUAL

When a teacher has four or five different classes with twenty-five to forty students in each class, the question arises at the end of the first day: "When shall I ever learn the names of all these students?" Further reflection on the problem leads to the conclusion that connecting names with faces is only the preliminary step; the larger problem is to know each student well enough to discover his potentialities, so that instruction may be organized to help him acquire a reasonable degree of achievement in relation to his potentiality. In initiating a unit, the teacher is particularly concerned with ascertaining the readiness of students for the work and the different kinds of abilities which may be developed. This is imperative in classes required of all students and advisable in every class.

Using the Cumulative Record. Most modern secondary schools have organized a cumulative system of record keeping which assists teachers to discover important characteristics of individual students. Frequently, the teacher is supplied with the following information, usually contained in cumulative records, which proves valuable in becoming acquainted with a new group of students: previous marks assigned, achievement test scores, IQ score, health status, and attendance record. Other information is often included in the record, but these five types are useful in locating these students: (1) high and low achievers according to previous teacher marks, (2) high and low achievers according to standard test scores, (3) students with slow and rapid rate of mental maturity, (4) students with marks high or low in relation to IQ score, (5) students with sensory defects or unusual physical characteristics, and (6) those who have a record of poor attendance. Frequently and in every class a few individuals are found who are low in all areas; others are very high. One or two have an auditory or visual defect, and some have a poor attendance record. These students need at-

tention first. The high achievers need work to challenge their abilities; the low achievers and slow maturers in most classes need less difficult reading material and different types of work activities. Those with auditory and visual defects are seated where their handicaps are least damaging. Students with poor attendance records are given special consideration to find causes, and more effort is made to interest them in the work. The remainder of the group, who are neither high nor low, have a good attendance record, and have no observable health or physical handicap, are usually studied more intensively later.

Data from the cumulative record give an indication of past performance, a very important aspect in determining readiness for the present. Previous marks and test scores indicate what has happened and are quite reliable indicators of what may be anticipated in the future. They need to be supplemented with informal teacher evaluations.

Using Informal Methods of Appraisal. Besides finding previous performance in related understandings and skills, rate of mental maturity, and kinds of abilities from analysis of the cumulative record, discovering less tangible qualities such as social and emotional control and work habits is another important consideration in determining readiness and knowing students as individuals. Further, cumulative records are not always complete, especially since many students transfer from one school to another.

Most secondary teachers work with large numbers of students; therefore, methods for discovering characteristics of individuals with minimum amount of time are necessary. Ordinarily the teacher does not have time to hold individual conferences or to administer, score, and interpret a battery of tests to discover these qualities. Informal methods for making preliminary estimates are often employed. Starting a folder for each student or commencing a record book with pertinent information is a device many teachers find useful for recording cumulative record data and the more informal data pertaining to emotional and social maturity and methods of work.

1. One method for securing information concerning emotional and social controls exercised by students is to construct a rating scale of key items with space for entering anecdotal records. As students engage in initiatory activities, their behavior is noted and recorded. A mimeo-

graphed rating sheet, using one copy per student, may serve in all classes taught.

Here are questions which may be used to rate emotional and social controls and to identify significant behavior. You may wish to change some questions and to add others.

Emotional Controls

1. How does the student respond when he seeks attention but attention is not given?
2. How does the student respond when he discovers he has made an error?
3. How does the student respond when classmates disagree with him?
4. How does the student respond to humorous situations?
5. How does the student respond when he does not "get his way"?
6. To what extent does the student exhibit attitudes of prejudice?
7. To what extent does the student daydream?
8. To what extent does the student exhibit fear of teacher, classmates, or situations?

Social Controls

1. What are the student's reactions to members of own sex?
2. What are the student's reactions to members of the opposite sex?
3. How do other students respond to him?
4. Does the student attempt to dominate others?
5. Does he withdraw from activities?
6. How much constructive control does the student exercise over other students?
7. How much constructive control needs to be employed by the teacher over the student?
8. Does he carry out group-appointed work?

Information of this kind is useful in any class, and it is while students are at work that their behavior is appraised. It is recorded at that time or after class. With a little modification, the questions may be stated so that students will rate self and others on the criteria.

2. Method of attacking work is an important factor in success and failure of the student in any kind of undertaking. Cumulative records frequently give no indication of how the student goes about his work.

An informal appraisal of the student's work methods may be gained through observing him and finding answers to these questions:

1. Does he give attention to teacher- or group-stated suggestions?
2. Does he have materials in readiness?
3. Does he commence work immediately?
4. For what length of time does he concentrate on the work?
5. Does he carry work to completion or start many things but complete few?

6. Does he know how to attack the particular work? At this point, list the specific steps for reading a book, working a problem, making a graph, or conducting an experiment to give your diagnosis clarity as related to the major type of work activity in which the students engage.

The purpose of informal appraisal to discover students with ineffective work skills is to assist them to improve so that they do not lose interest in work or fall behind their classmates unnecessarily from the start. Frequently those students who are upset because of social or emotional immaturity also have poor work habits. They are more concerned with these problems than with classroom learning.

All information leading to knowing the student as an individual should be gathered for the purpose of discovering how instruction may be organized to be of more worth to him. In many classrooms data have been gathered and analyzed to discover characteristics of the individual, to put him in a category, and then nothing further is done to help him make a better adjustment. It is probably better for the teacher not to take time to secure information when no adjustment in work activities or materials of instruction can be made on the basis of the findings. When the student knows that he is of interest to the teacher and that the teacher is concerned with him as a person and is willing to take into account his interests, needs, and personal idiosyncrasies, such knowledge in itself tends to make him more interested in class activities.

LEARNING THE CHARACTERISTICS OF THE GROUP

Knowing students as individuals needs to be supplemented with analysis of interaction among individuals in the whole group. Informal appraisal of social and emotional maturity yields clues concerning

group interaction. Another method for discovering direction and intensity of feelings within a group—a group in which members have had opportunity to become acquainted with one another—is to administer a sociometric test. You recall from the previous discussion of sociometric techniques in Chapter 2 that analysis of student choice of friends or partners in work activities locates (1) leaders—those students who are chosen most frequently by others; (2) cliques—those students choosing one another but making no choices outside their small group; and (3) isolates—those students rarely chosen or not at all.

Any teacher new to a group should utilize already-established leaders to get the class moving in the desired direction. When committees are organized and the teacher appoints chairmen, such chairmen should be popular members of the class. When students organize into committees on the basis of interest and select their own chairmen, they usually pick out the established leaders themselves. Whether committee or individualized activities are utilized in instruction, getting the coöperation of the established leaders is highly important. Students are more likely to imitate behavior of their own selected leader than that of a teacher-appointed model who is unpopular. When the teacher praises or cites for illustration the model performance of a disliked student, the tendency for those students disliking him is to reject his performance. You may feel that it is unfair to give attention to the few popular students in order to secure their coöperation. Over a long period of time this procedure is ineffective because you want to establish a good feeling among all students so that none are isolated; however, while initiating a unit of work with a group of students relatively unknown to you but quite well known to one another, the best method for getting a whole class going in the direction you desire is to make sure that the leaders coöperate with you.

What to do about cliques, whether to allow them to sit near one another and to work together in committees or to separate them, can be decided only after discovering factors which hold the members together. When cliques are held together by undesirable factors—dressing peculiarly or lavishly, avoiding classroom work, resisting teacher suggestions, or any type of unsocial behavior arising in or out of the

school—two avenues of approach may be followed. First, keep the clique members together and try to change their attitudes and behavior as a group; or second, place individual clique members in different groups so that classmates may influence their attitudes and behavior desirably. What to do depends largely upon the intensity of feeling among clique members and the ability of the teacher to interest them in a class activity to the point that the activity holds attention more than does a clique member. Generally it is unwise to separate closely knit clique members prior to establishing desirable attitudes or interest in activities. What happens when four clique members are separated by the teacher and seated in different parts of the room? They pass notes, talk more loudly, and make frequent trips to various parts of the room to visit their friends. When they are separated and placed in four different committees, progress of each committee is seriously impeded.

Isolates need attention, particularly when the isolation presents an emotional barrier to learning. Mary, who is chosen infrequently or not at all, achieves relatively well in chorus. Susan, who is aware that she is not accepted, becomes emotionally disturbed and does not achieve nearly her potential—daydreams instead of singing or listening. Susan needs help first. In any kind of learning situation where the objective is to assist all students to develop social skill in organizing an activity or carrying it out coöperatively, all isolates need special attention. Generally, they can be brought into the group most readily through discovering an interest or skill which has prestige value among other students. Thus, Susan, who is not liked because she appears unfriendly to everyone and withdrawn from class activities, may be helped when the teacher discovers that she can sing quite well; her singing of a particular selection causes the class to want her to take part in an operetta. Frequently a shy but not rejected student is placed near another who is well accepted as a mechanical arrangement for bringing him into a group. Eventually the isolate must be assisted in building the skill to overcome causes of his isolation. When a student is isolated because of prejudice of the group, the group must be helped to overcome their prejudice.

Sociometric tests, informal appraisals, and cumulative records yield important clues for learning characteristic of individuals and of group

interaction. Because knowing characteristics of the class is so important in guiding activities which follow, these primary sources of information should be used to whatever degree is necessary early in the learning situation.

BUILDING A GOOD EMOTIONAL ATMOSPHERE

Building desirable student attitudes toward learning requires that pleasant rather than unpleasant feeling accompany the learning activities. Enthusiasm, pleasantness, and freedom from disruptive tensions are to be sought rather than anger, fear, boredom, and the like. The particular feelings which develop among students may be controlled to a high degree. Personal characteristics of the teacher and procedures employed in helping the class develop standards of conduct largely determine the kind of emotional atmosphere the classroom will have. We shall examine two factors related to emotional atmosphere which are of crucial importance in getting off to a good start.

Teaching Personality. Personal characteristics of the teacher such as appearance, vitality, enthusiasm, sociability, use of English, manner of treating individuals, and expression of own emotions are frequently grouped and called teaching personality. Classroom personality vitally affects the emotional climate of the classroom.

One may get a good estimate of his classroom personality by examining specific situations which occur in the classroom or by having someone observe him. One may usually improve himself through discovering weaknesses and working out remedial procedures. Three factors related to classroom personality—enthusiasm, courtesy, and fear—are examined with a brief indication of their importance during initial phases of teaching.

1. Enthusiasm is a contagious feeling to about the same degree that depression is. Compare your reactions to an instructor who is highly enthusiastic about problems of teaching with your reactions to one extremely bored or dissatisfied with his work.

Enthusiasm for student affairs as shown by expressed interest is as important as enthusiasm for the subject matter. Both are necessary, especially in initiating a unit or course. Unfavorable attitudes toward

the sometimes erratic but normal conduct of adolescents lead to anything but enthusiasm. One who is bored with the particular teaching assignment will generate little interest in students for the work.

One way to develop more enthusiasm for adolescents and for a particular teaching assignment is to set up investigations like those outlined in Chapters 2 and 3. Set up an experiment to ascertain which developmental task is most important to the group. Locate the task with which they are having most difficulty. Learn which methods and materials will contribute most to those with slow and rapid rates of development. Find out the extent to which the group will assume responsibility for its own conduct. Try to discover the most effective method of teaching this group or to what extent individual or group methods of instruction are effective in this particular class. When you begin a teaching assignment to solve a challenging problem (every class has many), sixty hours of interesting discovery per week will be less destructive to your mental health than forty hours of drudgery. Your added enthusiasm will generate increased effort and higher enthusiasm in the class.

2. Courtesy is often forgotten in the classroom, especially when dealing with large groups of students. Parents meet Miss Carr, a charming and gracious young woman, at a PTA meeting. They wonder why their daughter, Julia, does not like to attend Miss Carr's class. Julia says she likes shorthand, but Miss Carr makes her so angry that she cannot learn. Miss Carr often makes statements such as, "Julia you are a sloppy girl. Just look at this messy paper"; "If you concentrated on shorthand more and on boys less, you would be a good student"; "Look at Mary's work—it shows a neat personality." Also, Miss Carr, quite abruptly, asks students to run errands for her without thanking them, and she has them correct papers without giving adequate instructions and then "bawls them out" for not scoring papers correctly.

Being courteous to students means following standards of gracious conduct. Use of sarcasm, treating adolescents like small children not yet ready for adult consideration, and criticizing on a personal basis before the whole class are types of discourtesy which adolescents resent. These procedures breed anger, resentment, and disrespect, which are damag-

ing to a good emotional atmosphere. Conversely, treating students graciously and courteously leads toward their using the same procedures with teacher and classmates.

3. Showing fear of classroom situations is damaging to an effective learning environment. Frequently teachers use anger and threats of punishment with students to alleviate their own feelings of insecurity. The best way to overcome insecurity is to build skill in meeting the situation; however, this is not readily accomplished. Prior to meeting a class there is little opportunity to practice what to do when meeting it. Here are some things one who has a feeling of insecurity may do to prepare for meeting a new group: (1) Plan carefully what will be done; (2) know the plan so well that reference to it is not needed in the classroom; (3) stand still in making the opening presentation (preferably behind a desk if difficulty with hands is anticipated); (4) speak more slowly than usual; (5) enunciate words more clearly than usual; (6) use a very short portion of time for the initial presentation; (7) make a clear, definite assignment to the students; and (8) get them started to work on the assignment quickly. Practicing your initial presentation in front of a mirror may prove helpful, as may making a record of your oral presentation.

Besides personal characteristics, the method employed with students in formulating and evaluating their standards of conduct affects emotional climate.

Standards of Control. Adolescents seek approval of age mates and adults. They attempt to satisfy needs in socially approved ways and want to be independent of authoritarian, adult control. Intelligent direction of these tendencies leads to setting up procedures whereby adolescents formulate their own standards of conduct and then evaluate actions in terms of these standards. Whole-class participation in formulating rules for behaving is effective because the group exercises desirable influence over nonconforming individuals. Most authorities, however, recommend that student groups, such as classroom committees and student government bodies, should not exercise punitive powers.

The method Miss Nelson used while initiating the unit on making

friends illustrates how a plan may be started. Let us review it. When committees met in the classroom after having gone to the library, Miss Nelson discovered that they were unnecessarily noisy. She called the attention of the whole group to the noise and elicited from them rules which they would follow in committee work in the classroom, in the library, and in the assembly. When all suggestions had been listed, Miss Nelson asked if any student felt that a rule was unfair; and if so, why it was. Each student had opportunity to present his objections, and every student had opportunity to decide rules of conduct.

The next step was to have each student copy the suggested rules. Each chairman was designated to lead a brief discussion in his committee concerning how the rules were being followed. At the end of the week, a short period of time was used for whole-class discussion, led by Miss Nelson. This procedure eliminated most of Miss Nelson's "policing" duties. Because the students shared in setting standards, they tried to follow them; there was little resentment or rebellion against authority. No threats of punishment were suggested by Miss Nelson. The emotional atmosphere was relatively free from tension, which so often arises when students feel that teacher-stated rules are arbitrary.

One technique for helping students feel the need for formulating and evaluating rules of conduct is to make a recording of their activity and discussion. The record is usually made without the students' knowing it and during a time in which they are boisterous and noisy. Mr. James discovered that his students started working quite soon after the bell rang but were very noisy and talkative. He had a student assistant operate a recorder in the rear of the room. After a few minutes he asked the students if they felt they were noisy and in turn received a loud chorus of "No." Then he asked the assistant to play the recording. The students found difficulty in accepting the record but were ready to discuss rules for getting started to work. Subsequent records were made to measure progress.

Procedures like these will work in most classrooms; they may not in those where morale is very low throughout the school and in those where many students are not interested in the work or already have learned antisocial classroom behaviors. Even with a group of highly

unruly students, helping them to establish standards should be attempted.

The emotional climate of any classroom may be controlled to a high degree. Establishing a feeling of friendliness among students, of trust and respect for the teacher, and of mutual considerateness among students and teacher is an important accomplishment in initiating a unit. How the students feel during the early stages vitally affects what they do and how they behave for the remainder of their study with the teacher.

SUMMARY

The first step in carrying out a plan during actual teaching is the initiation or introduction. A high degree of leadership, enthusiasm, and positive control of learning activities is required because initiatory activities are organized and directed so that students (1) focus attention toward the teacher and proposed outcomes, (2) examine objectives and define those that they will pursue, (3) plan procedures for engaging in and carrying out subsequent activities, and (4) establish, tentatively, a group goal and individual goals. Interest in the work is assured when these purposes are achieved because motives from within the student are aroused; he actively seeks to reach his goals. The extent to which students actively participate in outlining procedures and planning subsequent activities depends primarily upon (1) the nature of the learning, (2) the maturity of the students, (3) the previous experiences of the students in assuming this kind of responsibility, and (4) the quality of teacher leadership.

Individuals vary in rate of learning and in kinds of abilities. Social relationships in the classroom affect learning progress, as does the emotional atmosphere. Therefore, in initiating a unit the teacher wants to (1) know each student as an individual, (2) discover characteristics of group interaction, and (3) establish an atmosphere in the classroom conducive to learning and free from disrupting emotional disturbances. Worth-while activities and a variety of effective methods may be employed to achieve an effective introduction. Sufficient time must be provided for initiatory activities because success of subsequent activities

depends upon how effectively the work is begun and upon the emotional atmosphere established.

QUESTIONS AND ACTIVITIES

1. Evaluate the advantages and disadvantages of having students in a circle or semicircle in initiating a unit. What major difficulties are encountered in securing this arrangement in some classrooms?
2. What are the values of using concrete materials and familiar activities in initiating a unit?
3. Does a verbal, visual, or combined presentation attract attention most readily? Discuss the extent to which teachers vary in effectiveness of verbal presentations, basing your remarks upon your experiences in high school and college classes.
4. Set up the specific procedures related to your area of interest for securing and holding the attention of a high school class. Secure or make materials to be used. Follow this same procedure in presenting a report, leading a discussion, or conducting a demonstration with your classmates or a group of teachers.
5. Outline procedures for helping students define their objectives or understand and accept proposed objectives.
6. How may a pretest, check list, or questionnaire be used to arouse interest and to help students understand the nature of their study?
7. What are the major difficulties involved in student-teacher planning of activities? What are the advantages and disadvantages of student-teacher planning?
8. What is the relationship between group objectives and a culminating activity?
9. Discuss factors which may prevent teachers from knowing their students as individuals.
10. Outline procedures for discovering and dealing with leaders, cliques, and isolates early in the teaching-learning situation.
11. How and when should codes of conduct to guide student behavior be formulated? Should students be given responsibility for defining and administering punishments?
12. Appraise the methods used by the tenth-grade teacher as outlined in

this chapter. Discuss those which are applicable to many high school situations.

REFERENCES

-
- Association for Supervision and Curriculum Development, *Group Planning in Education*, Washington, National Education Association, 1945.
- Association for Supervision and Curriculum Development, *Toward Better Teaching*, Washington, National Education Association, 1949.
- Giles, H. H., *Teacher-Pupil Planning*, New York, Harper & Brothers, 1941.
- Goetting, Martin L., *Teaching in the Secondary School*, New York, Prentice-Hall, Inc., 1942, chap. 16.
- Miel, Alice, "Learning to Plan Together," *Teachers College Record*, March, 1947, pp. 391-403.
- Rivlin, Harry N., *Teaching Adolescents in Secondary Schools*, New York, Appleton-Century-Crofts, Inc., 1948, chap. 5.
- Stiles, Lindley J., and Dorsey, Mattie F., *Democratic Teaching in Secondary Schools*, Philadelphia, J. B. Lippincott Company, 1950, chaps. 13, 14.



Organizing and Directing Developmental and Culminating Activities

Through skillful organization and direction of initiatory activities the teacher establishes an emotional atmosphere in the classroom conducive to learning. Activities are engaged in whereby the students become acquainted with the teacher, with one another, with codes of conduct to guide behavior, and with instructional materials. Where a basic text is used, they learn how to use it efficiently and intelligently, as they also learn to use the library and supplementary materials. Part of the initiatory activities include setting tentative goals and outlining preliminary methods for achieving them—a coöperative process engaged in by students and teacher. Achievement of goals requires that students engage in learning activities to build specific understandings, skills, and attitudes. The activities which are organized and carried out for this purpose are called developmental.

Developmental activities should be planned and carried out so that learning proceeds continuously and efficiently—for example, by helping the students establish tentative goals in the form of a problem to be solved, a project to be completed, or a level of skill to be attained. Developmental activities are then directed to produce a high level of student performance and conduct in the culminating activities of the unit. Thus, culminating activities, planned early in the sequence, serve to focus student attention toward major objectives and to direct effort in the desired educational context over a considerable period of time.

These preliminary statements concerning developmental and cul-

minating activities are clarified as we identify a learning sequence for understandings, for skills, and for attitudes which is common for most adolescents; as specific examples for implementing the sequence are outlined; and as the problems of continuing motivation, goal reorientation, and flexibility in planning and carrying out activities are discussed.

IMPLEMENTING THE DEVELOPMENTAL SEQUENCE OF LEARNING

In Chapter 3, general principles underlying the developmental sequence of learning were established as follows: First, learning is a continuous process of organizing and reorganizing experiences. Second, learning proceeds from simple to complex, from familiar to new, and from concrete to abstract or symbolic. Third, the learning process is characterized by an ever changing relationship between the learner and his environment and a change in the learner himself. Besides these generalizations, we know that adolescents vary in such characteristics as stage of maturity, capacity for learning, methods of work, achievement, and intensity of motivation for classroom learning. Therefore, activities which implement a developmental sequence of learning and at the same time accommodate individual differences must (1) incorporate variety, (2) utilize a variety of materials and resources, (3) incorporate a variety of instructional methods, (4) allow an appropriate amount of student determination in planning and execution, (5) incorporate both individual and group work, and (6) be carried out sequentially. The culminating activity must be so organized and directed that each student contributes to its success and through such contribution (1) fixes understandings and discovers further applications, (2) demonstrates the higher level of skill which he has developed, and (3) establishes desirable attitudes toward classmates, the teacher, the school, and the whole learning situation.

With these broad principles established, organization of activities to implement the learning sequence in (1) building understandings, (2) building skills, and (3) modifying attitudes is analyzed. The separate treatment of understandings, skills, and attitudes serves to focus attention on activities and methods of instruction wherein major attention is directed toward each. One should not infer from this organization that learners build only understandings, skills, or attitudes

during a given instructional period. As stated in Chapters 3 and 6, most learning involves the simultaneous development of understandings, skills, and attitudes. However, in teaching a unit like "How can plant and animal life be conserved in this community?" most of the learning activities are directed toward building understandings which will guide action. In teaching a unit on square dancing most of the activities are pointed toward building a useful skill. In teaching a unit in music appreciation, most attention is given to attitudes. The three units just cited are used for illustrative purposes in the discussion which follows. The first part of the discussion in building understandings is specifically directed toward the major learning product, understandings, and in summary form an outline is presented of the skills and attitudes which may have been learned as the unit was carried to successful completion.

BUILDING UNDERSTANDINGS

The problem-solving method of teaching is perhaps most effective for developing understandings in classes such as English, social studies, and science in any unit where the understanding of words and processes constitutes a significant portion of the student's learning. When the problem-solving method is employed, various units are undertaken in a sequential series organized around a central theme. Also, within each unit a developmental sequence is implemented through the teacher's direction of the learning activities.

A GENERAL SEQUENCE FOR TEACHING UNDERSTANDINGS

In the building of understandings through use of the problem-solving method, the learner first becomes aware of a problem; second, gathers information and analyzes it to clarify the problem; third, poses hypotheses or probable conclusions; fourth, gathers more information and analyzes it in relation to the hypotheses; fifth, draws conclusions; and sixth, tests and applies the conclusions in other problem-solving situations. In assisting students to build understandings, the teacher may follow this general sequence:

1. Organize and direct initiatory activities so that students discover suitable problems related to the unit.

2. Guide initiatory activities, using demonstrations, explanations, visual aids, and direct experiences with the problem so that the student masters terminology necessary to become aware of a problem and to state it concisely and with meaning.
 - a. In introducing new terminology, relate the meaning to sensory experiences, such as hearing, seeing, feeling, and to previous experiences of the student.
 - b. Use simple demonstrations and illustrations which are easily understood; avoid the complex.
 - c. Use concrete materials and problem situations.
3. In teacher-led discussion, arrive at a clear statement of the problem. Generally, allowing students to state problems in their own terminology for analysis of clarity and meaningfulness is recommended.
4. Help the students recognize the problem in the situational context. This includes analysis of available time and resources while delimiting the scope of the problem and while considering the methods for solution.
5. Help the students in planning the attack for solution of the problem.
6. Provide the students with direct sources of preliminary information to get started; help them to develop procedures for obtaining others. Usually the basic text and reference materials in the classroom should give the most needed preliminary information. These sources of information should be readily available to students and thoroughly understood by the teacher.
7. Help the students develop techniques for analyzing and evaluating information.
8. Help the students to develop criteria for stating conclusions clearly and for judging the adequacy of the conclusions.
9. Help the students discover appropriate situations in which to test and apply their conclusions.
10. Appraise adequacy of the students' understanding of the concept, process, or generalization through appraising their ability to apply it in new problem situations. The students assist in appraisal as part of the learning sequence.

In the previous chapter we noted illustrations of initiatory activities organized to achieve the first six steps outlined above. We now examine how the latter steps, particularly, are implemented through a series of developmental activities which culminate in a project and appraisal.

DEVELOPMENTAL AND CULMINATING ACTIVITIES IN A UNIT IN GENERAL SCIENCE

Here is an outline of activities proposed in a unit for a group of thirty students in ninth-grade general science.¹ The activities are organized around a central theme: "How can we conserve plant and animal life in this community?" The setting is an urban community of about twenty thousand near the Rocky Mountains. Some students from farms attend the high school and this general science class. The activities in the first week may be classified as initiatory, those in the ninth week as culminating, and those in intervening weeks as developmental.

As you read the outline, fill in details concerning how you would improve the activities and teacher procedures or modify them to suit your situation.

Week One: (Overview, orientation, becoming aware of and stating problems, recognizing the need for study)

1. Teacher-led discussion in which the theme of the unit is outlined and its relation to the previous unit—conserving human resources in the community. Students volunteer information about their experiences with conservation. New terminology related to conservation is placed on the board and is examined in the basic text.
2. Show and discuss a conservation film. (Many good films related to conservation in the area in which one lives are available.) Define new terminology presented in the film and discuss problems posed.
3. Bring into the class a forest ranger to discuss conservation practices in national forests and mountain parks.
4. Help the students state specific problems to be undertaken during the unit through (a) assigning reading in the basic text, (b) discussing the previous activities, and (c) discussing problems the students volunteer concerning their own experiences.

¹Mr. LeRoy Kerns, science teacher at Colorado State College of Education Laboratory School, proposed specific activities and their sequence.

5. Administer a test of concepts and generalizations to discover where individual students are now; administer a sociometric test to discover with whom students would like to work; have the students check first, second, and third problems in which they are most interested.

Week Two: (Delimiting scope of problem and preliminary planning of attack for the culminating activity or group goal)

1. Teacher-led discussion of the major plant and animal resources in the area. Refer students to basic text, supplementary references, and specific books in the library to obtain information concerning value of plants and animal life. Use specific questions to relate this to previous discussion and original statements of problems. Ask students to bring other information related to their problems, especially pictures, graphs, and charts which are suitable for dressing the bulletin board.
2. Replace previous teacher-organized display with student materials. Discuss materials brought into class. Organize the class into four committees: conservation in city parks; conservation on the farm; conservation in the residential and industrial areas of the city; and conservation in mountain parks and forests. Each committee hereafter is assigned responsibility for dressing the bulletin board on consecutive weeks.
3. General class discussion of the procedures in organizing committees and work responsibilities within committees. Committees meet with teacher supervising carefully so that generalized procedures are not departed from widely.
4. General class discussion of what kind of information is needed, where it may be obtained, who should obtain it, how records of it will be kept, and how it will be presented. Then, each committee takes up the same problems.
5. Discuss the culminating activity—a demonstration of conservation practices through posters, display of graphs, charts, pictures, and models of water conservation plans. The demonstration is especially for a PTA meeting, seven weeks hence, but the posters and models will be exhibited in the display area of the whole school during the week.

Week Three: (Gathering information and preliminary analysis of it)

1. Definite reading assigned to the whole class in basic text and supplementary references with teacher help given in interpreting charts, graphs, etc. Definite periods are assigned for individual reading.
2. Library assignment. Definite procedures to help students locate specific kinds of information, to take notes, to make a bibliography, and to guide conduct in the library.
3. Further collection of information. Discuss procedures for recording in-

formation obtained from the library and for discussing information in committees.

4. Plan a field trip to the surrounding rural area. Outline specific kinds of information to be obtained.
5. Carry out the field trip, noting irrigated farming, dry farming, strip cropping, crop rotation, wind breaks—natural, such as grass or trees, and artificial, such as fences—grazing practices, animal feeding, insect control, and the like.

Weeks Four and Five: (Gathering information, analyzing it, and making definite plans for the culminating activities)

1. Same general plan as third week with a trip to a city park, examination of various home landscaping arrangements and of industrial practices. In the field trip, note variety of plant life and arrangement, irrigation practices, features of beautification and recreation, maintenance procedures in parks, destruction of public property. Students plan to continue observations of homes, factories, and city parks outside class time.
2. During the fifth week, definite plans are made for making posters, models, charts, and graphs, including securing the necessary art materials.

Weeks Six and Seven: (Further gathering of information, major emphasis on analysis of information, methods for presenting committee work to class, and preparation of exhibits)

1. Field trip to national forest with a guide from the forest service. Note is made of water control through natural storage, water diversion, reservoir systems, and use of water for generating electricity; plant conservation such as grazing practices, tree planting and lumbering, insect control, and fire control; and wild-life conservation practices.
2. The exhibits take more definite form; and while completing these, students check the comprehensiveness and accuracy of their understandings in committee meetings and in discussion with the teacher.

Week Eight: (Synthesis and drawing of preliminary conclusions)

1. Whole-class discussion, committee discussion, and individual and committee work on projects serve the major purposes listed above. Readings in basic text also help to achieve these purposes.

Week Nine: (Appraisal and application)

1. First two days used for committee reports; on the third day the presentation is made to the PTA; fourth day is used to administer original concepts test and a problems test to discover extent to which students

understand and apply conclusions; fifth day, whole-class discussion of activities in the unit including the demonstration and the tests. Relationship of this to the next unit on conserving mineral resources in the community and in the nation is outlined.

In the above sequence of activities you note that in successive weeks emphasis was placed upon sequential steps in problem solving related to the whole unit. Also, opportunity for implementing problem-solving techniques was present in daily and weekly activities. Throughout the unit the students had experiences which helped them build concepts and generalizations (understandings) related to conservation of plant and animal life by seeing actual conservation practices and lack of them, seeing a film, listening to the teacher and classmates, reading a basic text and other materials, discussing with one another, and hearing community persons. Thus, the verbal abstractions and generalizations gained richness of meaning as guides for conduct of the students in an important phase of their daily living—conservation of resources.

Dressing the bulletin board, making the posters, models, and graphs, along with explaining them to parents and classmates, taking the final tests, and finally discussing the unit activities provided situations for testing conclusions and making applications.

Social skills and desirable attitudes toward conduct were explored in committee work, in using the library, in going on the field trips, in meeting parents and other adults, and in whole-class discussion.

In gathering and analyzing information drawn from various sources the students were able to build related skills: reading the basic text and other materials efficiently, listening attentively and graciously, collecting and recording information by taking notes carefully, making charts, graphs, and models, and using graphic materials for the presentation.

BUILDING SKILLS

In specific classes in the high school program—physical education, typing, shorthand, music, crafts, and industrial arts—developing a higher level of skill is a primary objective of instruction. In a variety of learning situations in other classes it is probably of lesser impor-

tance; however, each secondary teacher may assist students to develop a higher level of skill in handwriting; reading printed copy, graphs, charts; drawing and sketching; oral expression; or examining a book intelligently. Building higher levels of skills like these follows a developmental sequence.

A GENERAL SEQUENCE FOR TEACHING SKILLS

When practice of skills is informal without guidance, the student frequently develops poor form which prevents his reaching a high level of performance. He builds inadequate or incorrect meanings which produce errors in performance thereafter. He commits many errors in executing the whole skill. Most persons who as adults are unable to swim, type, play a musical instrument, use art media, or read quite rapidly could have learned to do so with proper instruction and guidance at the right time.

In organizing developmental activities to assist the learner to develop a higher level of skill, the teacher's major tasks are to know and to be able to demonstrate correct form; to understand the whole pattern and its best organizational sequence for learners in various stages of developing the skill; and to organize the sequence, length, and spacing of practice periods into a meaningful and efficient pattern for the learner.

Here is an outline of steps that may be followed in teaching skills which involve motor activities. As you read, discover how it applies to a skill in your area of teaching.

1. In initiatory activities, help students feel a need for building the skill.
 - a. In relation to a current problem under investigation.
 - b. In relation to enjoyment of leisure time.
 - c. In relation to a career.
2. Start with the whole skill as the means for building preliminary understanding of it.
 - a. Demonstrate to the class the whole skill—dancing, swimming, playing a musical instrument, reading a chart, drawing a picture, etc.
 - b. Stress sequence, form, and correctness of movement rather than speed in your demonstration.

3. Have students carry out a sufficiently large pattern of the skill to sense the total pattern.
4. Provide visual cues, verbal illustrations, and actual guidance of the student's movements as needed in the beginning.
5. Watch for difficulties which students encounter and help students to overcome them early. This helps to identify part skills which should be practiced next.
6. Break the whole skill into parts as necessary.
 - a. Identify the most important parts and practice those first.
 - b. Help the learner to systematize the pattern psychologically and logically.
7. Provide short practice periods in the partial skills at first and relate them to practice of the whole skill frequently.
8. Set up practice periods according to your best estimate of the difficulty involved, the progress of the learner as practice is under way, and the attention span of the student.
 - a. Whole-class practice may be useful on the whole skill.
 - b. Individual practice should be used to help individuals overcome deficiencies.
9. Set up procedures whereby students measure own progress.
10. Organize culminating activities wherein the student demonstrates the skill.

From analysis of the steps, it is apparent that establishing need for the practice and correct form and understanding of the whole skill are especially crucial at the beginning. Building accuracy must come before development of speed.

As the learning proceeds, length of practice increases to produce higher accuracy, precision, and speed. Specific drills for part skills should be individualized, suited to the progress made by individual learners. Assisting the student to identify his own errors and difficulties, to set up procedures to overcome them with teacher help, and to measure progress is an important feature of the developmental sequence. This sequence assumes that the individual's total reaction—physical, mental, and emotional—is progressively changed as he organizes and reorganizes experiences into a higher level of skill and a more satisfying performance.

DEVELOPMENTAL AND CULMINATING ACTIVITIES IN SQUARE
DANCING

In junior and senior high school classes, square dancing is taught with considerable success to groups, mixed according to sex and age. In square dancing total rhythmic body movement is coordinated with music and verbal calls accompanying the music.

A sequence of activities follows for a unit arranged for a mixed group of senior high school students for a seven-week period; length of class period, fifty minutes.² As you examine the activities, refer to the sequential steps previously outlined for teaching motor skills.

Week One:

1. Bring into the gym a demonstration group from an advanced physical education class to exhibit correct form and precision. Have this group dance a rather elementary square dance and then a more complicated pattern (two complete dances). Discuss demonstration with beginning dancers. Note the following briefly: (a) floor pattern, (b) relation of music to dance, (c) dancers' enjoyment of the activity. Ask beginning dancers to choose partners and form squares. Listen to a few phrases of music and clap the underlying beat. Teacher gives instructions as to head, foot, and side couples, partners, corners. Teacher demonstrates walk with music; couples walk around square to music with partner (promenade). Teacher demonstrates "swing with partner" and "swing with corner." Students follow the caller in doing a combination of the above steps to music.
2. Review basic steps learned in above combination. Introduce "allemande left" and the "grand right and left." Practice without music. Give verbal cues as "left hand to corner, right hand to partner." Teach the dance "Take a Little Peek" using allemande left and grand right and left and promenade as a "break" after each couple completes the square. Use verbal and physical cues for correct form sparingly in the beginning. Introduce and demonstrate "Birdie in the Cage."
3. Review dances learned previously and instruct dancers to listen closely to caller so they will do what he asks. Use all combinations learned and have couple one do "Take a Little Peek" around square and couple two

² Specific drills in this unit were proposed by Miss Doris Steffy, who has taught square dancing to groups from elementary to adult levels.

- do "Birdie in the Cage" etc. When enjoyment is at height, introduce the culminating activity—a demonstration of square dancing to be performed at intermission of a school dance six weeks hence. Have a discussion and encourage dancers to plan the committees they will need.
4. Practice simple routines learned. Introduce "Duck for the Oyster" using the "break" learned in an earlier lesson. Teach "Old Arkansaw," which is a varied combination of the patterns which are familiar to the dancers.

Week Two:

1. Review dances that were taught last week. Demonstrate elbow swing and balance with partner. Give students an opportunity to practice. Teach "Split the Ring" using the above-taught patterns. Use short whole-class practice to guide form and mastery of the steps. Use remainder of period for organizing the class into committees to arrange for the culminating activity.
2. Begin day's activity for each day hereafter with routines already known. Have two couples (that have been given previous instruction by the teacher) demonstrate the "do-si-do" as the teacher gives verbal instruction in this particular pattern. Have couples one and two practice together and couples three and four walk through the pattern. Assign the students who have demonstrated to a square and have them assist the couples that are learning. Use do-si-do as a "break" in a dance that is known by the students. Teach parts of "Texas Star" that are not familiar. Practice and then immediately teach the whole dance.
3. On Friday, bring the skilled group from the physical education class to demonstrate the circle dance; with them in the class, teach the circle dance to beginners.

Week Three:

1. Begin with circle dance. Review the dances most recently introduced. Review do-si-do with the entire group walking it through. Use the step immediately in a dance with the music. Use remainder of period for reports of committees and general class discussion of the demonstration to be given.
2. Review round dances. Begin a new dance, "Rye Waltz." Practice the waltz step. Identify students who are interested in calling some of the dances they already know and those who want to spend time out of class learning new dances.
3. Review all dances; diagnose errors and work in small groups on these. Give student callers an opportunity to practice with entire group.

Determine whether committees need more time to work on demonstration and plan use of time accordingly.

4. Spend increasingly more time on whole dances and less on steps. Interperse practice periods with committee meetings.

Week Four:

1. Continue with dances learned. Use "openers" and "mixers" so students will be dancing with many partners. Give student callers an opportunity to present new dances. The teacher offers helpful suggestions to callers and dancers as needed. Spend considerable time on building precision and correct form in the review and in new dances. Have groups discuss their choices of dances for the demonstration.

Week Five:

1. Same general plan as for week four: practice round dances, square dances, and waltzes. Practice dances that are to be used in demonstration. Provide callers opportunity to practice in order to build confidence and poise for the demonstration. Give the students an opportunity to help in the selection of the dancers for the culminating activity. Each square may perform for the remainder of the class and those not dancing may vote for the best two couples in each square and in this manner select those for the demonstration.

Week Six:

1. Continue practice to gain precision and better form. By this time all students should be enjoying their activity. The demonstration comes at the school dance on Friday evening.

Week Seven:

1. Discuss first with the whole class the activities of the previous weeks, particularly the demonstration. Have each committee meet and make recommendations—costume committee, props committee, and the general organization committee—concerning how their work might have been improved. Continue square dancing first part of week and then introduce social dancing, which is the next unit.

In reviewing the sequence of activities, you note that the general sequence for building skills was implemented. Further, planning and executing the culminating activity served several purposes, chief of which were to provide rest periods during practice, to establish an immediate goal toward which intensive practice was directed, to build understandings and social skills not directly related to dancing, and to

fix desirable attitudes toward the activity itself in that possibility for securing attention and approval from age mates was provided at the dance.

BUILDING ATTITUDES

Previously we learned that an attitude is a learned predisposition to react in a characteristic way, favorable or unfavorable, toward an object, a person, or a group and is emotionally toned. Because attitudes are learned and not inherited and because they are of great significance in determining an individual's conduct in many situations and his responses in a given learning situation, we are concerned with the kind and intensity of attitudes which develop in the school and classroom.

Generally, teaching attitudes is considered of secondary importance; major attention is directed toward understandings and skills. At specific times in almost every class, particular attention is directed toward building desirable attitudes, and major instructional activities can be organized for that purpose.

A GENERAL SEQUENCE FOR TEACHING ATTITUDES

Most attitudes develop over a long period of time starting in early childhood. Thus, an attitude of right and wrong conduct begins in the experiences which the child has with his parents. The child learns in many situations what right and wrong mean on the basis of parental approval of right conduct and disapproval and punishment of wrong conduct. As the child matures, further experiences in the home, the neighborhood, and the school strengthen or weaken particular attitudes. At the beginning of high school years some attitudes are quite firmly fixed and are not readily modified. Other attitudes, however, are subject to modification because the period of adolescence is one of vast change, characterized by readiness for building attitudes into a meaningful pattern of values or philosophy of life.

In the developmental sequence for learning attitudes, a considerable amount of learning is partially unconscious; that is, the maturing adolescent interprets conduct as right or wrong through accepting, without question, the codes of the person whose conduct and behavior he imitates. The thirteen-year-old girl, for example, identifies herself with

a movie heroine and imitates the behavior of the heroine without reasoning about it. The boy who accepts the gangster, the soldier, or the statesman as his ideal does likewise.

The vividness and intensity of feeling accompanying a particular situation are significant in the development of attitudes. Thus, the boy who has enjoyed speaking before the class throughout previous school years develops a most negative attitude toward it when his voice fails at a crucial point in the junior play. The girl who has liked to sing before a class develops a negative attitude toward continuing, if, in her first appearance before a large group, she forgets her lines and is laughed at by the audience. So it is with many attitudes. Pleasant and moderately intense feeling is likely to clinch a particular desirable attitude; intense and unpleasant feelings are likely to build unfavorable attitudes which persist even though an extended program of readjustment.

Because feelings are important in attitude formation, the totality of the sensory aspects of experiences must be considered in attempting to build a particular attitude. If we want to build a preference for good music, we should have the learners experience good music through hearing and seeing performances in a setting characterized by beauty and richness.

In summary of the foregoing, the following sequential generalizations are outlined as guides for building attitudes:

1. Portray in conduct and performance expression of the desired attitude.
2. Make the setting in which the learning activities are carried out attractive to the students.
3. Make the activities themselves enjoyable; avoid all disruptive incidents.
4. Appeal to as many sensory perceptions as possible.
5. Keep the verbal analysis of activities and performance at a minimum.
6. Conclude specific activities when enjoyment is at a relatively high pitch.

You will recall from previous discussion that all learning proceeds from familiar to new, simple to complex, and concrete to abstract. The learning of attitudes follows these principles.

DEVELOPMENTAL AND CULMINATING ACTIVITIES IN A UNIT IN MUSIC APPRECIATION

At the outset it should be clear that appreciation of a musical performance and preference for a particular type of music are somewhat different. The person who appreciates a musical performance usually does so because he has mastered many of the performance skills. The individual who prefers a particular type of music need not have mastered any of the performance skills; instead, he feels better when hearing the music he prefers. Thus, the trained vocal artist may appreciate the performance of another artist who sings in a foreign language without preferring it to some other kind of musical expression. The individual who has not developed skill in singing may never learn to appreciate the performance and will probably not develop a preference for it.

Here is a six-weeks' outline of developmental activities for a unit in music appreciation for a tenth-grade class in a senior high school. The members of the class are not performers. The major purpose of the unit is to build preference for and enjoyment in listening. The content, method, and sequence are highly subject to variation with specific groups.³

Week One:

1. The room is decorated attractively, chairs arranged in a semicircle facing a combination radio-phonograph. As the students enter the room, a record of the school chorus, accompanied by the orchestra, is playing moderately softly. Hereafter, a record is playing each day as students enter the room; and one that the majority of the class prefers is played as they collect materials and leave the room at the end of the period.
2. Discuss with the students the general objective of the unit—to listen to different types of music for enjoyment. Have each student list in order the types of music he prefers, including specific titles, arrangements, and performers.
3. Have students bring to class records which they prefer, and each day

³ Gerald Meeder, student teacher at George Washington High School, San Francisco, California, originated and executed the general plan. James Barrett, Supervisor of Music, Hutchinson Junior College, Hutchinson, Kansas, examined its applicability to other high school situations.

play several different types which are preferred. Also, bring into the class different arrangements of the same composition by different orchestras and performers.

4. Discover movies the students prefer and discuss briefly the background music in the films and student reaction to it.
5. Make plans for a student-directed listening club to meet once per week on a voluntary basis during noon hour. Outline plans for committees of students to keep the bulletin board up to date with information concerning musical events of the school, the churches, the theaters, civic centers, and the like. Briefly discuss hereafter, on any day, musical performances which the students attend. Have them keep diaries of what they hear and see and how they feel about it. A program scrapbook will be made and kept by the whole class.

Week Two:

1. Bring in records of background music of films. Ask students to identify films from which the music is drawn, also to note how they feel now listening to the music compared with hearing it while seeing the film and listening to the dialogue.
2. Continue background film music and student record preferences. (Much background music for romantic films is classical and semiclassical.)
3. Hold attention to the semiclassical and classical music by presenting, with the recordings, colored slides—turbulent surf of the Pacific, large sweep of calm ocean, snow-covered peaks of Sierras, fog creeping in over the Golden Gate, busy hour on Market Street, boy and girl dancing, etc. These are likely to encourage imagination and quite definitely will hold attention to music for longer periods and provide incentive for brief discussions.
4. Present popular ballads moving from straight dance arrangements to symphonic arrangements of the same selections. This procedure makes possible a good transition from the popular to the classical. There are many fine arrangements of popular tunes which are arranged exactly as symphonic music might be arranged. Many people learn to understand really complex music by the study of complex arrangements of simple melodies.

Week Three:

1. Move from symphonic arrangements of popular ballads to similar arrangements of semiclassicals and classics. Also from modern to early composers. Introduce secular and sacred choral music.

2. Continue playing student preferences but with less frequency and less total time.
3. Carefully select radio and television programs available which fit the general pattern in which the class is moving.
4. Play brief selections of "mood" music with colored slides. Have students discuss their mental pictures; make sure not to overemphasize the discussion of mental pictures.
5. Outline specific plans for the culminating activity—a forty-five-minute listening period for the faculty on each day during the sixth week. Students are in charge of selecting the records, greeting the faculty, introducing the records, and bringing visual materials into the program.

Week Four:

1. Continue general pattern as above. Between playing of records, start giving brief facts about composers and the times in which they wrote. Suggest reference books wherein students may discover more about composers whose selections they prefer.

Week Five:

1. Continue general pattern as above with more attention to referents—life of composer and historical trends. Continue using student-preferred records, which preferences are being recorded by the students on a weekly basis so that they and the teacher are kept aware of changing preferences.

Week Six:

1. Continue as above. Play short, selected arias, choruses, and overtures from opera. Continue attention to referents and introduce single musical instruments with expert demonstrations. Play specific records to help students visualize the role of the instrument in the selection.
2. Conduct the listening hour for the faculty.
3. Conduct brief daily discussion of the listening hour.
4. Have the students list specific titles and arrangements which they prefer now to make comparisons with their original selections.

Hereafter, the direction and sequence of activities is dependent upon the changes and direction of change which occurred during the first six weeks. It may continue from more student interest in composers, arrangements, and instruments toward building understanding of the musical staff, clefs, major and minor scales, scale structure, and harmony. Some students may become sufficiently interested to want to

learn to play an instrument. It is entirely possible that most of the class will want to spend some time in singing.

DEVELOPMENTAL AND CULMINATING ACTIVITIES IN A CORE CLASS

In the previous discussion developmental activities organized along subject lines, in one-hour class periods, and for particular grade levels were outlined. The scope of the activities was somewhat limited because of time, subject organization, and grade placement factors. In the junior or senior high school where a core class is required for all students at each grade level and where usual subjects are offered as electives, learning activities may cross subject lines, may cross grade lines, and may cross school boundary lines. Adaptations from the three units previously outlined in this chapter will serve as illustrations.

CROSSING SUBJECT LINES

Suppose the unit "How can we conserve plant and animal life in the community?" had been set up for study in the ninth-grade core class. The class meets for a half-day. The separate classes in general science, social studies, mathematics, and English have been integrated into this one core class. It is required of everyone in the ninth grade. The understandings to be developed would now include a considerable number related to the geography of the region, the history of the people, the economic life of the people and region, and various art media. Also, arithmetic problems related to making the models, figuring cost of maintaining and improving the parks, irrigation, fertilization, and the like may have served to build mathematical understandings and skills. Activities such as writing letters to secure materials from federal, state, and local conservation agencies, writing reports of field trips, or writing themes concerning any aspect of the problem may have been included to build writing skills and to improve English usage. The literature of the region may have been explored along with a study of the history of the people. The activities connected with the field trips to the farms and city areas may have been broadened to include interviewing various community persons and then reporting back to the class to build oral communication skills.

To integrate the activities thus requires careful and detailed planning by the teacher and students, broader understandings and skills than many teachers possess, and close coöperation among teachers with special skills and understandings who may contribute most to the students' educative experiences. If this integration can be accomplished efficiently, it is entirely possible that the various developmental and culminating activities will be organized into more meaningful educative experiences by the students.

CROSSING GRADE LINES

The units in square dancing and music appreciation may be adapted for students from different grade levels. Suppose that the required core class were supplemented with physical education, required each day of all students. Two periods in a six-period day would remain for electives such as algebra, art, music, foreign language, commercial subjects, industrial arts, and the like. The square dancing could well be one of the activities in the required physical education class, available to all students from any grade who choose it. The same applies for the unit in music appreciation. While other students from all classes are in chorus, band, orchestra, or some other elective, a group of students from all grades in the junior or senior high school may elect to take music appreciation.

CROSSING SCHOOL BOUNDARY LINES

In the units, activities were outlined which took students from the school into the community; also, persons from the community were brought into the school. Activities like these have excellent possibilities for building a higher degree of motivation, assuring a higher measure of transfer from school learning to out-of-school life, establishing meaningfulness of the learning for the students, and influencing community attitude toward the school desirably.

Return to the unit in music appreciation. Some adolescents like sacred music, especially choral singing and organ music, as well as popular dance tunes. Further, many of them have experienced this music in the beautiful setting of the church. One of the objectives of secondary education is to build respect for individuals, including their

religious ideas. One of the characteristics of adolescents is that they have deep interest in religion as it relates to building a philosophy of life.

In the community where there are large churches of many denominations—Protestant, Catholic, Jewish, and others—the opportunity for visiting them is usually great. Through visits to churches, planned by the teacher and church head and with approval of parents, for the purpose of discovering what music in different churches is like, is it not possible that the students as well as the teacher might find some likeness among the various groups and develop a feeling of beauty and respect for the spirit expressed in the music of all of them?

Field trips to churches may not be practicable in some communities. The principles illustrated, however, may be applied to a variety of developmental activities to bring important aspects of the adolescent's school life into closer relationship with his life in the community.

THREE PROBLEMS RELATED TO THE DEVELOPMENTAL SEQUENCE

In any classroom, even one in which students are given a high degree of responsibility for selecting activities, for establishing their own objectives and goals to be achieved, and for organizing methods of attack, three major problems are encountered by the teacher. First, students frequently become excited and enthusiastic about an activity early, but as the situation progresses, interests wanes and work output declines. Continuous motivation throughout the unit is thus an important problem. Second, students necessarily change interpretation of the original goal or objective as it comes into clearer perspective. Thus, the problem of goal reorientation is significant. Third, use of time, including integrating length of units into the yearly program and completing various activities in each unit, has been preplanned prior to commencing the unit activities. Often specific dates on which units will be completed need to be changed, depending upon the particular group of learners and the specific classroom situation.

CONTINUING MOTIVATION

Especially during junior high school years, boys and girls live largely in the present. Interest in particular activities wanes rapidly unless the

teacher helps students see the relationship between their classroom activities and current happenings of importance to them. Quite frequently while teaching we arouse a high degree of interest at the beginning and then do not give sufficient attention to particular individuals at the time interest and energy expended in a classroom learning situation begin to wane. Some individuals have developed poor work and concentration methods. They start out energetically with strong interest and best intention to complete a given task; but as the work needed to complete the task becomes more concentrated or strenuous, they give up easily. If we are to implement a developmental sequence which meets individual differences and yet keeps the entire group moving in the desired direction, we must pay close attention to motivational factors throughout the learning period.

Some of the more important generalizations established in previous discussions concerning motivation in learning are now worthy of review. You may refer to the various units outlined in this and the two previous chapters to find specific examples of how the generalizations apply.

1. Learning activities hold attention and direct energy of the learner consistently over a long period of time as they are related to the learner's present interests. Therefore, the teacher should help the learner relate activities to present interests and through the activities help him develop new and wider interests.

2. Learning activities hold attention and direct energy consistently as they are related to needs of the learner. Three of the most important needs of adolescents which may be capitalized upon in the classroom are the need for varied activity, the need for belongingness or affiliation with a group, and the need for attention and approval from age mates and adults. In daily learning situations throughout a unit when interest begins to wane, variety should be brought into each day's activities by interspersing activities such as reading, discussing, working at the board, making models and charts, dressing the bulletin board, and the like.

Each student must be made to feel that he belongs and is accepted at least by the teacher and two or three classmates. Each student should receive social approval for work well done. This objective may be ac-

complished through whole-class discussion and committee discussion of performance and conduct. Students may be taught to develop standards and to evaluate their conduct and performance according to such standards.

3. Knowledge of progress is a powerful motivating force. Helping students establish methods and techniques for measuring progress and assisting them in this process must be considered at all points in a learning situation. Record keeping of reading rate, speed in typing or shorthand, vocabulary learned, sound records made at intervals of speech or music performance, frequent analysis of themes written or paintings made, tests and examinations at intervals—these are a few of many effective methods through which students may measure progress.

4. Employing concrete and symbolic rewards as incentives for learning is more efficient than using punishment and reproof. Praise by the teacher may be used freely, primarily to satisfy the adolescent's need for adult approval. Rewards should be given sparingly, only as necessary to develop interest for engaging in work. Criticism should be constructive and objective, directed toward the performance rather than toward the learner himself. Helping the adolescent identify and overcome errors in any kind of conduct or performance tends to promote continuous interest in learning activities.

5. Completing some part, however small, of a larger problem directs energy over a longer period of time toward full solution of the problem. This sense of accomplishment, closely related to measuring progress, is mentioned at this point to emphasize the need for daily attention by the teacher for considering the immediate and present as well as the future. Each of us recognizes its importance in our own work. Unless we feel, each day, that we have completed something which contributes to fulfillment of a larger pattern, we tend to lose interest in our daily activities.

6. A feeling of success is imperative for continuing interest and effort. The total situation must be so organized that such is possible for each learner who tries to make progress. Any teacher-initiated or group-appointed task which is so difficult for the student that he repeatedly fails causes interest to wane. Any task which the learner sets for himself and in which he fails leads him to quit or to change the difficulty

of the task. Any group of activities so difficult that the learner who tries hard fails can lead to nothing but lack of effort and waning interest in the activities. A small measure of success keeps the learner actively engaged in the activities and keeps the whole class moving in the desired direction.

GOAL REORIENTATION

To help a student establish a goal means to help him organize a pattern of felt need into a meaningful expression of projected achievement or performance. In each unit presented in this chapter a group goal in the form of a culminating activity was discussed—presenting a conservation exhibition for the PTA, entertaining during intermission at the school dance with a square-dance exhibition, and conducting a listening hour for the faculty. Thus, the group goal was to reach a given level of performance and to demonstrate particular achievement at a given time. Each student should participate in these activities and will do so as he becomes involved in wanting to make the performance successful and as he identifies his individual role in making it successful.

Realistic goal setting is learned and follows a developmental sequence in itself. It begins with feeling a need in a particular context; vaguely seeing the relationship between the need, methods of work, and the final expectations; organizing methods for reaching the goal; and, as progress is made in the goal direction, perceiving more clearly the end product and appropriate methods for arriving there. The goal itself is frequently modified as an individual works toward achieving it.

As learning progresses, two kinds of procedures are effective in relation to goal reorientation. First, the teacher evaluates the student's performance, progress, methods, and time use related to his goals. Evaluation may take place in whole-class discussion, in meetings with committees, or in conferences with individuals. Second, the teacher helps the student develop criteria for evaluating his immediate performances in relation to his goals. One way to do this is to have each student, at weekly intervals, estimate how he is progressing on the specific objectives he has outlined; then have two students discuss their evaluations with one another; and finally, have an evalua-

tive interview with each student as needed. In situations where committees have been organized, the need for and frequency of individual interviews will be lessened, but not completely eliminated, as committee members assume increasing responsibility for success of the culminating activity and for helping one another in outlining what kind of progress is necessary to make the culminating activity a success.

In some high schools practically all goal-setting related to classroom learning is performed by the teacher because of preference or because of curriculum prescriptions. When students have had few guided experiences in setting their own goals, the teacher must start slowly in giving them responsibility and should anticipate that a relatively long period of time will be needed in getting them to the point where they set reasonably realistic goals related to their abilities. Generally, two types of students need much help in a classroom situation. The first has high ability but low aspirations. He is satisfied with a low level of performance and does not utilize his energy to achieve as he might. The second has experienced many failures previously. He sets his goals too high, too low, and very erratically. He does not seem to profit from experiences in which he may change his goals or methods as he supposedly gains clearer perspective of his goals and better understanding of his abilities.

Goal reorientation is a problem for the teacher, too. Frequently, the teacher in preplanning and during actual teaching sets a particular level of performance or progress to be reached on a specific date. As the classroom situation unfolds and progress is not made as anticipated, the teacher's goals need reorientation. This requires flexibility and a great deal of careful judgment on the part of the teacher because the goals of the students in the class are highly dependent upon the goals the teacher wants them to reach.

FLEXIBILITY IN CARRYING OUT PLANS

In preplanning a unit the teacher makes an estimate of how the learning activities will proceed. Objectives are identified. Major subject content is outlined. Appropriate initiatory, developmental, and culminating activities, designed to achieve the objectives, are planned with tentative time limits for completion. Materials and resources

needed to carry out the activities are identified, and the approximate time at which they will be used is indicated. Evaluation instruments and procedures are identified or constructed, and tentative dates are set for their use.

In each of the above aspects of planning and carrying out plans a degree of flexibility is required. Brief examination of each of the areas makes this need more apparent.

Modifying Objectives. In identifying and stating objectives, the teacher may have included some which the students do not accept readily, or the students may propose some which are more appropriate to their specific interests and needs. Generally, we anticipate that the teacher knows more about socially valid objectives than do students. However, the following factors may cause the teacher to change some specific objectives as actual teaching gets under way or to modify the level of student proficiency to be achieved related to them:

1. The teacher overestimates or underestimates the average ability and achievement of the students related to the particular learning objectives.
2. The differences among students are so wide that part of the understandings and skills have already been developed by the more advanced students and part of them are too difficult for the less advanced.
3. The interests and goals of the students are not in complete harmony with the teacher's stated objectives; therefore, in order to initiate an effective learning situation, the objectives must be modified.

These three conditions are not usually operative when the teacher knows the students well. However, in introducing any unit in a particular sequence the experienced teacher who knows the students quite well frequently finds that the objectives do not meet the needs and achievement patterns of all the students.

Some authorities prefer that teachers do not state objectives prior to meeting the class but arrive at them in a coöperative way with students at the beginning of the unit. For the teachers who are relatively unacquainted with their students, with the school's objectives, and with general objectives of education, this may be wise procedure. If, however, the teacher does not identify the direction in which instruction will go, a great deal of time will be lost because the teacher,

in the coöperative process, is not able to provide the necessary leadership.

Modifying Content. Subject content is outlined in preplanning so that major facts, information, and related skills receive due emphasis, so that the organization of content is most meaningful for the learners, and so that the teacher knows the field or fields as the case may be. In the two units, plant and animal conservation and square dancing, it is probable that little departure from the planned organization would evolve in teaching. However, in the music appreciation unit, wide departure from the original organization might be needed. Thus, in teaching, depending upon the direction and progress of the class, the planned content outline might be followed closely or departed from sharply in order to achieve specific objectives.

In no unit or classroom should mastery of preplanned content by a specific time take precedence over accommodating learning rate of the students. The material may be "covered" by the teacher, but the students will not have learned. Equally important, the teacher's following content outline should not impede student progress. Working the problems on pages 58 and 59 or reading pages 75-90 during a given time is frequently too easy to challenge the average and more capable learners.

Modifying Proposed Activities. Activities which may be engaged in to achieve specific objectives are highly variable and are particularly subject to the local situation. Learning activities or "what we are going to do" more than the stated objectives and outline of subject content capture and hold student interest. Students need to share more in the planning of activities than in any other phase of the classroom learning situation. Activities different from those preplanned by the teacher are frequently proposed by the students and are more appropriate in the local situation because the students are more interested in their own specific situation, know it better, and are more eager to carry out activities which they share in planning.

When student-proposed and -planned activities are followed in any class, time schedules for completion may need to be modified. The teacher, in all cases, leads in planning. It is the responsibility of the teacher more than of the students to establish the suitability and ap-

appropriateness of student-proposed activities. It is also a major responsibility of the teacher to set the time limits within which particular activities may be lengthened or shortened. This does not violate any democratic principle or principle of effective learning. Students are more secure when they know the limits within which they may exercise freedom in choosing activities and completing them. They do not resent observing such limits except as teacher arbitrariness enters into the decisions.

Adapting Use of Materials and Resources. Use of materials varies from one situation to another depending upon availability. Current materials gathered by students are frequently more meaningful and educative than are those which the teacher suggests. An effective procedure is to make definite plans to incorporate use of student-collected material, so that appropriate materials are brought into class according to a pattern wherein their use may be most educative.

When we show movies, bring community persons into the school, take students into the community, or use any kind of equipment or supplies from an outside source, we may not depart widely from a schedule. When a film is ordered from a central distributing point for a given date, the class should be in readiness for its efficient use. We should not cancel or suddenly change plans for bringing persons from the community into the classroom or for taking students into the community. When we use microscopes from the science laboratory, art materials from the art room, records and a player from the music room, or maps, charts, and graphs from a social studies class, we should return them on the days indicated for doing so. Generally, where the use of materials and resources involves time schedules of other persons, the teacher must follow planned schedules quite rigidly and get the class ready for efficient use of them. The amount of flexibility one may exercise in use of materials is highly dependent upon the availability of resources and materials within the classroom as a complete unit.

Changing Evaluative Procedures. Days on which tests will be administered, conferences held with students, and students' self-evaluation begun are usually established in the preplanned unit. These, too, may be departed from depending on their purpose and the rate at

which activities are completed. If we want to ascertain the change which occurs in understandings, skills, and attitudes during a unit, the test or other evaluative tool must be administered at the beginning and at the end of the unit and at no other time; otherwise we will not achieve the purpose. Rigid following of schedule is demanded in this case.

We should not use a preplanned achievement test on a given date, even at the end of a semester, when opportunity has not been available for students to learn the materials tested. Flexibility in this instance is required.

The most important phase of evaluation in secondary education, helping students develop efficient methods of self-appraisal, requires a considerable degree of flexibility on the part of the teacher because self-appraisal is a learned skill. Students learn it, like other skills, at unequal rates. Some need much more help than others. It is difficult to plan this schedule far in advance.

In carrying out all phases of a developmental pattern of teaching we recognize that there are identifiable sequences for different types of learning. The sequences are common to most human beings. Adolescents mature at different rates, learn at different rates, have varying degrees of ability and achievement, have somewhat different interests and goals; therefore, the teacher must be flexible in carrying out plans.

SUMMARY

Developmental and culminating activities are organized so that learning proceeds continuously and efficiently. Developmental activities are planned and carried out to help students build understandings, skills, and attitudes related to goals. Adolescents vary in many respects: maturity, capacity for learning, methods of work, degree of motivation, and achievement; therefore, activities which implement a developmental sequence in learning and at the same time accommodate individual differences must necessarily incorporate variety, utilize a wealth of materials and resources, be vitalized through appropriate instructional methods, allow an appropriate measure of student participation in planning and execution of plans, incorporate individual and group work, and be directed toward achieving the objectives.

Culminating activities are planned early in the learning sequence and serve to focus student attention toward major objectives and to direct interest and effort in the desired educational context over a considerable period of time. Students, in coöperation with the teacher, establish tentative goals in the form of a project to be completed, a broad problem to be solved, or a level of skill to be demonstrated at some time in the near future. These kinds of culminating activities serve to fix understandings and skills, to help students discover applications for their newly built understandings and skills, and to establish desirable attitudes toward classmates, the teacher, the school, and the whole learning situation.

Activities designed to achieve objectives are highly situational because the effectiveness of any activity depends largely upon the characteristics of the particular group of adolescents, the kind of learning to be developed, the materials and resources available in the school and community, the organizational pattern of the curriculum, and the preferences and competence of the teacher.

Keeping interest and work output at a high level throughout a sequence of learning activities, helping individuals and the group set more realistic goals and develop appropriate methods for achieving them as the learning situation progresses, and being flexible in following planned schedules are important considerations in attempting to set up learning situations wherein growth in understandings, skills, and attitudes proceeds continuously and efficiently. The possibility for enriching learning experiences for all youth enrolled in secondary schools is highly challenging and relatively unlimited as consideration is given to identifying the sequence common in different kinds of learning and to teaching procedures designed to implement the learning sequence in classroom practices.

QUESTIONS AND ACTIVITIES

1. List five to ten major understandings related to your area of interest which students might develop during a given time. Outline the develop-

- mental activities to build these understandings. List skills and attitudes which should be built simultaneously.
2. List subject fields in which the problem-solving method of teaching works well. In which subjects or areas does it not work well?
 3. Appraise the strengths and weaknesses of the unit in conservation.
 4. Which of the guides proposed for teaching skills are applicable in teaching (a) typing, (b) music, (c) English composition, (d) crafts, (e) oral expression, or (f) operating a movie projector?
 5. What major difficulties would be encountered in carrying out the activities in the unit on square dancing?
 6. What major difficulties are encountered in teaching a core class for a two- or three-hour period? What values may accrue? Can developmental teaching, as outlined in this and the two previous chapters, be accomplished more successfully in a core class? Why or why not?
 7. Why is it difficult for administrators to hire teachers to teach a core class? Why does a teaching staff frequently prefer to continue with single subjects or broad-fields courses?
 8. Discuss the three problems related to implementing a developmental sequence of learning in actual teaching practice. On the basis of your experiences, which of the three is most crucial?

REFERENCES

- Association for Supervision and Curriculum Development, *Toward Better Teaching*, Washington, National Education Association, 1949.
- Douglass, Harl R., and Mills, Hubert H., *Teaching in High School*, New York, The Ronald Press Company, 1948, chap. 9.
- Goetting, Martin L., *Teaching in the Secondary School*, New York, Prentice-Hall, Inc., 1942, chaps. 17, 18, 19, 20.
- Mursell, James L., *Developmental Teaching*, New York, McGraw-Hill Book Company, 1949, chaps. 7, 10, 11.
- National Society for the Study of Education, *Learning and Instruction, Forty-Ninth Yearbook*, Chicago, University of Chicago Press, 1950, Part I, chaps. 3, 4, 5, 6, 8.
- Quillen, I. James, and Hanna, Lavone A., *Education for Social Competence*, Chicago, Scott, Foresman and Company, 1948, chap. 6.

CHAPTER 9

Conducting Individual and Group Work

Methods include all those procedures and techniques which the teacher employs to help children learn understandings, skills, and attitudes. The term "method" may be used to designate a formalized instructional procedure, such as the Morrison method, described later in this chapter; it may refer to techniques for guiding individual work—supervised study and flexible assignments, for example; or it may indicate procedures for organizing and conducting panel discussions, projects, sociodrama, or committee work. Method should be conceived broadly with an attitude of experimentation to discover most efficient procedures. Narrowly conceived, method becomes a formal, rigid procedure for trying to achieve all outcomes with all classes.

Methods used in particular situations with particular groups of students largely determine the quality and amount of learning and also how the learning will be used by the students. Thus, the procedures and techniques of instruction used to make learning come to life in the classroom constitute a significant aspect of the whole teaching process.

In previous chapters the broader principles and generalizations for organizing activities according to a developmental sequence of learning were discussed. In this and the three following chapters more specific techniques related to the following problems are investigated:

1. How may individual and group work be organized and guided effectively?

2. How are instructional materials used efficiently to make learning activities most meaningful to the students?

3. How may students be helped to develop effective study and work methods?

4. What may be done to help students develop their creative abilities and to appreciate the beautiful?

Problems related to methods for directing individual and group work are now discussed: (1) How may one decide whether to use individual or group work? (2) What are some of the principal types of individual work and how may it be guided effectively? (3) What are some of the principal types of group activities and how may they be organized effectively?

PERSPECTIVE IN USE OF INDIVIDUAL AND GROUP WORK

Two extremes in individual and group work may be found in the classrooms of Miss Holland and Mr. Smith, teaching arithmetic in the eighth grade.

In Miss Holland's class the students work individually. Miss Holland has worked out a contract with each student. Mimeographed assignments in arithmetic constitute the basic instructional materials used. The assignments vary in difficulty, starting with easy and moving to difficult. They include materials graded for average achievement levels through several grades. Each student progresses at his own rate in completing the assignments. By the fourth week of the semester most students are working on different assignments. Miss Holland helps students individually, but there is little helping of one another during class time. There are no common problems for the whole group and no whole-class discussions related to specific mathematics skills and processes.

In Mr. Smith's class all students are working on a common problem—developing a personal budget. Mr. Smith led a whole-class discussion to decide what kinds of information and facts would be needed to build a personal budget. The class as a group decided on a form for the budget. All students worked together on problems involved in budget making as such. Each individual secured the facts and information for making his budget and recorded it on the form and made his

computations. As individual budgeting was under way, the class divided into committees to consider problems of installment buying, checking and saving accounts, and computing the percentages of total expenditures of the whole class for items like food, clothing, recreation, books, etc. The more proficient students assumed leadership in the committees and also helped the less proficient with computational problems in completing personal budgets. Mr. Smith spent most of his time in discussing problems with the whole group and with committees. He helped individuals as he worked with the committees. Mr. Smith did not conduct whole-class drills in arithmetic processes as such nor did he give any common textbook assignment to the whole class.

Two college instructors observed the classes of Miss Holland and Mr. Smith during the fourth week. One rated Miss Holland high because of the way she provided for individual differences in the differential assignment and contract plan. He rated Mr. Smith quite low because "Mr. Smith was not teaching enough arithmetic fundamentals." The second college instructor rated Mr. Smith very high because "the boys and girls were learning how to work together as well as to use arithmetic processes in making budgets—two very important skills which transfer to home life." He rated Miss Holland quite low, mainly because he felt that the required arithmetic course did not contribute to important school objectives as it might.

Which of the above ratings do you approve? You probably have insufficient information to come to a conclusion and perhaps agree that both instructors should be rated in terms of the objectives which they seek to attain and the relationship between the objectives of this arithmetic class and those of the total school program. We should not decide whether individual or group work is of more value except in terms of the objectives sought and in terms of student achievement attained. To achieve some objectives individual work is necessary; to achieve others, group activities are required. To put oneself in the position of attempting to achieve all school objectives exclusively through individual or through group activities is unwise.

Whether to employ techniques requiring individual or group work may be determined through close analysis of (1) objectives of the

school, (2) objectives sought in the class, (3) the nature of the students, and (4) teacher preference of instructional method.

OBJECTIVES OF THE SCHOOL

Examine two of the Ten Imperative Needs of Youth outlined in Chapter 1. The tenth Imperative Need states: "All youth need to grow in their ability to think rationally, to express their thoughts clearly, and to read and listen with understanding." This need incorporates several instructional objectives common to many classrooms. Examine them more specifically to ascertain which may be achieved through individual work, which through group activities.

How does a student grow in ability to think rationally? Growth in ability to think rationally does not occur in abstraction. No one subject has particular advantage over another for developing this ability nor is there a part of the brain or a mental faculty which can be trained for it through drill and practice. A higher measure of rational thinking is developed as the student successfully engages in problem-solving activities. Problem solving begins with a felt need and purpose, involves collecting information and facts, analyzing facts and information, discovering hypotheses and probable conclusions, testing conclusions, and acting upon them. Generally, group activities wherein the whole class identifies a large problem and divides into committees to work on sub-problems, with each committee bringing findings to the whole group, are more adequate for building this ability than is individual work. Carefully conducted class discussion to identify problems leads to a feeling of need and tends to establish purpose. Working together to identify the sub-problems for committee work helps the class to analyze the character of the whole problem and to examine it critically—to see the relation of parts to the whole, including methods of solution. One can more readily appraise the adequacy of his own solution—the clarity of his thinking about the problem—as he measures it against other solutions, especially in the case of conclusions which are stated as verbal generalizations. The give-and-take procedure common among secondary student discussion groups lends itself admirably to this appraisal. Thus, group activity more than individual work is likely to be

effective in building ability to think rationally about problems students meet outside the classroom.

How does a student grow in ability to express his thoughts clearly? To express his thoughts clearly in written form, the student writes—an individual activity for the major part. When we want to develop this ability we may set up problem-solving situations which require writing; or the problem itself may be to learn to write more clearly, in which case attack is made by individuals to improve written expression. The teacher or classmates, in either instance above, may help the student appraise the clarity of his written expression. It is certain, however, that the student will not develop the ability simply by talking about writing or by engaging in other activities which do not require writing. He must actively concentrate on writing if he is to build clarity in written expression.

How does a student grow in ability to read with understanding? Such ability develops as he reads materials of many kinds, such as textbooks, novels, newspapers, reference books, and the like—mainly an individual activity. To increase speed in reading requires practice for that purpose, practice which is supervised so that errors are diagnosed and overcome. To increase understanding of what is read may involve discussion with others but need not. Using a dictionary to learn new words, using reference sources to gain broader acquaintance with referents, checking one's own ideas of what has been read with the ideas of others who have read the same material—all of these are useful in increasing understanding. As with other fundamental skills, a group project or problem-solving activity may prove highly effective for building a feeling of need and purpose for reading; but students must read to improve the skill.

How does a student grow in ability to listen with understanding? One may learn much through listening attentively. Listening attentively to others demonstrates social consciousness and respect for the individuality of others. Usually adolescents build listening and oral communication skills in close time proximity. In relatively few situations outside of school does any adolescent listen to another for a sustained period of time. The same is true for adults. Generally, we listen attentively for short periods of time, as others listen to our ideas. In most

classrooms listening skill can be built more effectively by having small groups work together than by having the whole class listen to the teacher or to one student.

Now examine the ninth Imperative Need: "All youth need to develop respect for other persons, to grow in their insight into ethical values and principles and to be able to live and work coöperatively with others." Learning to respect other persons and to live and work coöperatively requires group interaction. Any class in which this need is an objective necessarily includes group activities in the classroom. Students may, of course, learn a great deal about respect for others through reading, observing, and listening; but direct participant experiences in a group are required to build the skills and understandings which are needed for coöperation based upon mutual considerateness and respect for the participants. Ethical values and principles result from experiences with other individuals for the most part rather than from indirect experiences such as those gained in listening and reading. Thus, if we want to change the value system of an adolescent who has already learned to cheat, we will be more successful by getting him involved in interesting group activities than by having him listen to lectures, read moral stories, or observe.

Review the above objectives and the proposed techniques. You note that in most cases the problem of deciding whether to use individual or group activities is not an either-or proposition; rather it is one of securing balance in terms of objectives. The whole curriculum organization into courses of study and the teacher's methods in specific classes should be planned carefully to achieve important educational objectives. Exclusive use of individual or group work will not achieve some important educational objectives.

OUTCOMES SOUGHT IN THE PARTICULAR CLASS

Some courses in the total school program of studies should help students develop a salable skill. Distributive education, industrial arts, home economics, agriculture, and commercial courses frequently serve this purpose. For the major portion of time in these classes, students work individually to develop a skill. Other courses are offered in the school primarily to help the student develop a useful skill which may

not be salable directly but which contributes to more enjoyment of leisure time. Crafts, music, creative writing, art, and swimming are examples of classes organized for this purpose. Students spend the major portion of class time in individual work. In the larger high schools, classes in advanced mathematics, the physical sciences, the social studies, English, and foreign languages may be offered as electives for students with high verbal and abstract abilities. In classes like these where the objective is to assist competent and interested students to gain comprehensive mastery of subject matter, there may be little need for group activities of any kind. Instead, each student works individually and proceeds to master the area without interference from classmates.

In Chapter 8, activities suited to specific instructional objectives within a classroom were outlined. For developing motor skills such as swimming, playing a musical instrument, typing, etc., much individual work is required. Group activities are needed to build social skills. To develop understandings, both individual and group work may be useful depending upon the nature of the understandings. Attitudes, tastes, preferences, appreciations, and values are specific to the situation. Much listening to good music in a pleasant surrounding is usually more efficient in building a preference than is group discussion of why it should be or is appreciated. Group discussions of and total group participation in setting up standards of conduct to be followed in the class are more effective in building democratic values than is individual work. Thus in classes where specific individual skills and social skills are to be developed, there must be balanced use of individual work and group activities.

THE NATURE OF THE GROUP

In previous discussions developmental tasks common to most adolescents were identified, and variability in such characteristics as health, achievement, interests, physical maturity, mental maturity, and social maturity was analyzed. Note briefly now how methods for grouping students into classes according to some of these characteristics affect instructional method.

In a large junior high school there are three hundred students in the eighth grade. In this school a separate class in arithmetic is required of

all eighth-grade students. How might these three hundred students be grouped into various sections or classes? What effect would grouping have on teaching methods?

In this school, students may be placed in different sections or classes on an alphabetical basis, according to IQ score, interest, chronological age, arithmetic achievement test score, previous teacher marks in arithmetic, or with reference to a combination of these. To get students of relatively equal arithmetic achievement in the same sections, the best single criterion is arithmetic test score. Test score and teacher marks are probably the best combination to achieve homogeneity in mathematical performance. Assume now that you have three sections in arithmetic. Section I of this eighth-grade class has students whose tested achievement is equal to average fourth-grade students; their previous marks in arithmetic are very low. In Section II no student has a test score lower than the average for eleventh-grade students and no student has received a mark lower than *B* throughout his school years. Section III has students representing the entire range of tested achievement and marks. To what extent would individual and group work be used differently in the three classes or sections?

Considerable experimentation yet needs to be concluded to answer the question. In general, students in Section I need individual attention and study of basic arithmetic processes. They will probably profit from concrete assignments made by the teacher and will exercise little initiative in organizing a group project or carrying it to successful completion. Most emphasis must be placed on building basic addition, subtraction, division, and multiplication skills using simply stated problems which are easily understood and related to daily activities such as spending and saving money.

In Section II, the fast group whose achievement level is eleventh grade or higher, most students will profit from individual work to a large extent. They will profit from textbook assignments in a relatively large measure, may be kept fairly close together working on the same problems and processes, and will exercise considerable initiative in working out rather complex group projects involving use of mathematics including algebra and geometry.

Within Section III, composed of students of all levels of achieve-

ment, the students may be divided into three or four groups according to their present levels of achievement. A broad problem is outlined for the whole class, parts of which are suitable for students at different achievement levels. In no case is it effective to drill the whole class on the same assignments. The individual contract plan, previously described in the class of Miss Holland, may be used if other courses in the curriculum make adequate provision to achieve some of the important socializing objectives of the school.

TEACHER PREFERENCE OF METHOD

In our teacher-education institutions certain methods of instruction receive more emphasis than others. Also, the preferred method changes with passage of time. Teachers who have been educated in a given institution quite frequently adopt the preferred method, use it in their early teaching experiences, develop much familiarity with it, and are uncomfortable trying a new method for the first time. Modern teacher education attempts to develop teachers who will experiment with new or different techniques to meet specific situations.

The rather formalized methods of teaching which have been widely taught in the past and are often discussed in current methods classes are the Dalton plan, the Morrison method, the project method of Kilpatrick, and the problem-solving method.

The Dalton Plan. Under the Dalton plan of instruction students work assignments individually according to a contract. The teacher works with each student in arranging the contract, in helping the student with difficulties encountered, and in evaluating individual performance. Each student progresses at his own rate. Some may finish usual requirements for eighth-grade arithmetic in the sixth grade or earlier. Others do not complete sixth-grade materials in the eighth grade. Each student, however, must finish assignments in sequential order and according to a time schedule which he and the teacher arrange.

A chief educational objection to this plan is that it stresses individualism rather than coöperation. A second major objection is that the method, for the most part, stresses mastery of teacher-made, subject-matter assignments rather than solution of problems which originate

in the daily lives of students. Also, there are some kinds of learnings which cannot readily be graded according to difficulty and mastered by students using only this kind of instruction. One of the primary difficulties in carrying out the plan, especially with large groups, lies in organizing and preparing the differential assignment materials.

As a method for taking care of individual differences in some areas of subject achievement the plan is noteworthy. To attempt to adapt it to all kinds of learning outcomes in all classes is unwise.

The Morrison Method. In the latter part of the nineteenth century, Herbart formulated five steps in the teaching sequence: preparation, presentation, association, generalization, and application. Later, Morrison developed a method for teaching which, in general, elaborates these steps and provides greater detail. In the 1920's and early 1930's the Morrison method was widely taught in teacher-education institutions. Many ideas from it are still taught today, as are the five formal steps outlined by Herbart; and many older teachers follow the Morrison method consistently.

In essence, Morrison would have teachers (1) discover where students are with a pretest of some type and very briefly indicate to students the relationship between this unit and the previous one; (2) present an overview of the unit, mainly to arouse student interest and to help students visualize the total unit work; (3) set up a relatively long-term assignment during which time the students assimilate the major facts and understandings in the unit; (4) set up a relatively shorter period of time during which the students organize the facts and information to present to the teacher and classmates; and (5) have the students make the presentations. The steps, stated more succinctly, are exploration by the teacher, presentation by the teacher, assimilation by the students, organization by the students, and recitation by the students. As applied to classes in history, mathematics, and English, the method is intended to lead to student mastery of the concepts or processes. Student mastery of materials is to be attained by these sequential procedures: First, give the pretest to find where the student is; second, teach or present the materials or processes; third, test to discover extent of mastery; fourth, diagnose errors found; fifth, teach again to eliminate errors; sixth, test again; and finally, reteach until mastery is attained.

You may readily conclude that if the teacher decided to fill the assimilative period with lectures or common textbook assignments and at the same time tried to get all students to the same level of mastery, great amounts of repetition of materials, frequent testing, and much student boredom might result.

The Project Method. Kilpatrick classified projects into four broad categories: the producer's project, the consumer's project, the problems project, and the drill project. Again, his is a unit method, as is the Morrison method. The producer's project may be individual or group and results in the student's producing something—as a desk, a dress, or a cake; frequently, home economics, agriculture, and shop courses employ this method. The consumer's project leads to use or appreciation of something already made: appreciation of music, art, or literature. The problems project consists of solving a problem—a verbalized or abstract type of problem such as "Why has the cost of public education not increased so sharply, 1940–50, as has the cost of operating the federal government?" The drill project leads to acquisition of a skill, such as reading with greater speed and comprehension, writing letters, or playing a musical instrument.

In examining the four types of projects, you note that most school learnings may be grouped into the four categories. Also, the method may be adapted to individual and group work.

Kilpatrick also identified four major phases in the learning process as purposing, planning, executing, and judging. His project method, based on these phases, emphasizes teacher-pupil discussion of the project to arouse a felt need or a conscious purpose, coöperative teacher-pupil planning of the project, and group work in executing the project and judging the outcomes. Depending upon the scope of the project, its comprehensiveness, and the developmental level of the learners, either individual or group projects might be organized using the method.

A major limitation in the use of this method is finding suitable projects which challenge the learners. In many classes it is admirably suited as a framework for method.

The Problem-Solving Method. In previous discussions, projects and group problems have been discussed as developmental and culminating activities in a unit. Projects and problem-solving kinds of activities have

been presented as group goals which tend to keep high interest and consistent work output directed in a meaningful educational context over a considerable period of time.

The problem-solving method, as such, was emphasized in Chapter 8, where its relation to building concepts and meaning of processes was examined. The problem-solving method of teaching is well suited to those required classes wherein a considerable range of achievement exists among the students and where verbalized generalizations or principles which guide action are the major outcomes desired. There is little doubt that generalizations are remembered for longer periods of time as they are related to a problem and as they are derived from discussion with others. You may refer to the discussion in Chapter 8 for further clarification of the problem-solving method and its application in a general science unit.

To summarize the discussion of perspective in using individual or group activities, criteria upon which to make decisions and generalizations concerning the probable values of individual and group activities are given.

One may decide extent of individual and group activities to be used in the class by answering four questions:

1. To what extent does your teaching to achieve the school's objectives require either kind of activities?
2. Which of the outcomes sought in your class can be achieved more efficiently through the two types of activities?
3. Will your students profit more from individual or group work?
4. To what method of teaching are you accustomed and how may it be adapted to meet the two major aspects of classroom learning—producing a competent individual performer and a socially conscious citizen who is a respected group participant?

Individual work or activity, skillfully conducted, is useful in achieving these objectives:

1. Building some individual skill such as that involved in reading, writing, arithmetic, swimming, typing, instrumental performance, etc.
2. Developing independent study and work skills.
3. Building desirable attitudes toward the worth-whileness of individual effort.

4. Satisfying the adolescents' need for mastery over things.
5. Helping retarded students make reasonable progress in many kinds of school learning except that involved in the socialization process.
6. Helping able students achieve a high degree of mastery in a subject field.

You may wish to add to or delete from this list. Examine it carefully with reference to the area in which you teach, and then note that there is considerable overlapping between the objectives achieved by individual work and by group activities.

Group activities are feasible for achieving these objectives:

1. Creating a favorable relationship between students and teacher.
2. Enhancing motivation through establishing conscious purpose, a feeling of need, and a group goal to be sought.
3. Reducing boredom.
4. Building democratic understandings and values.
5. Building social interaction skills involving oral discussion and attentive listening.
6. Solving broader problems of the type frequently met outside the school in social groups such as the clique, the home, the church, and neighborhood groups.
7. Developing codes of conduct, socially approved, which are accepted and followed by the students.
8. Building ability to appraise one's ideas and values in relation to others.
9. Building methods of attack on problems.
10. Satisfying the adolescents' need for attention and approval from age mates.
11. Satisfying the adolescents' need for belongingness or affiliation with a group.

In most classes there is definite need for a careful balance between individual and group activities. When we consider (1) the individual development and the socializing objectives of secondary education as incorporated in the Ten Imperative Needs of Youth, (2) the developmental tasks of youth, (3) the variability commonly found among students in our classrooms, and (4) the developmental sequence for different kinds of learning, it appears unwise to confine ourselves to a

single teaching method or to exclusive use of individual or group activities in the classroom.

TYPES OF INDIVIDUAL WORK

In Chapter 6, classroom activities were grouped into four major classifications: (1) teacher-centered, which involve listening, reading, or observing on the part of the students as a whole class and in which learning occurs through individual activity on the part of the students; (2) student-centered and individualized, in which the students work individually and the teacher assists individuals; (3) student-centered and coöperative, such as projects, problem-solving activities, group games, and the like, in which students work together as a class or in committees; and (4) discussion and oral presentations of different types, in which the class participates as a unit or in smaller groups with frequent interaction between teacher and students and among students. With these classifications established, various activities falling into the first two classifications are discussed as individual activities and those falling into the latter two are treated as group activities.

LECTURES

The student learns as he listens to and observes the lecturer—individual activity on the learner's part. If he learns by listening and observing, he gains nothing from his classmates. Though lecturing is a mass instructional technique, the learning is individual on the part of the student and the lecture method is therefore treated as a type of individual learning activity.

Lecturing may serve (1) to present an overview when introducing a topic or unit, (2) to summarize important information not readily available to the class in reference books or the library, (3) to clarify textbook or reference discussions, (4) to explain a process, (5) to express a point of view, and (6) to summarize ideas or progress at points in the unit or daily class activity. There is probably no class in which lectures should be used exclusively or as the major instructional technique. There are many classes in which short periods of explanation serve useful purposes such as those just mentioned.

Some of the more important objections to widespread use of lectur-

ing in high school classes are based on the psychological fact that learning is an active, not a passive, process. Lecturing tends to be uninteresting to some or many learners in almost every class when used widely. Lecturing provides little opportunity for problem-solving activities on the part of the students. Lecturing allows little opportunity for students to exercise initiative, and no opportunity to develop democratic interaction skills. Lecturing tends to thwart the exploratory aspect of learning in that the students do not question reliability of the information presented. Unless the teacher is very judicious in selecting terminology much of the lecture is not understood by many students. Lectures invariably are ineffective in secondary classes when the teacher organizes materials for lectures which are not of interest to the students, when the terminology used is too difficult, when the context is not meaningful to the students, and when lectures are presented frequently or in a monotonous manner.

One may improve lectures through careful planning. First, consider the instructional objectives to be achieved; second, consider the material to be presented from the students' point of view; third, use concrete illustrative materials and demonstrations; fourth, outline important structural parts of the lecture on the board; and fifth, talk fluently and clearly with little reference to notes or actual reading of printed materials.

To secure better attention from students, these suggestions are appropriate: First, arrange your class in a circle or semicircle so that each student sees you; second, encourage students to ask questions if they do not understand; third, encourage students to offer supplementary comments; and fourth, encourage the students to take notes or to draw up questions to be asked about the lecture. These suggestions, when carried out, tend to arouse mental activity on the part of the students and to keep attention directed to the lecture. Following usual good procedures of grooming, presentation, and respect for the listener tends to promote interest in the lecturer and his remarks.

QUESTION-AND-ANSWER RECITATION

A commonly employed teaching technique which persists in educational practice is the question-and-answer recitation. The teacher as-

signs textbook materials to be read or problems to be worked. After the study period ends, questions are asked about the work. The major purpose of the questioning is to discover the extent to which students know the correct answers as presented in the assignment. It is not uncommon to find teachers using half of the total instruction period in presenting rapid-fire, factual-type questions to students who attempt to answer them.

Some of the major weaknesses of the recitation part of this method should be examined. It usually does not create a favorable feeling between teacher and students because students look upon the teacher as an inquisitor rather than a helper. It frequently leads to aggressive reactions among students because teacher approval necessarily accompanies correct student responses and disapproval accompanies incorrect responses; at least, students usually feel this way, however tactful the teacher may be. It is of little if any use in building democratic attitudes and values; contrariwise, it is likely to promote highly individualistic, competitive attitudes. It is a very poor way to build interaction skills involving oral discussion and attentive listening; in fact, many teachers resort to marking devices, unorthodox seating arrangements, rewards, punishments, demerits, and the like to get students to recite or attend to the recitation. It is not conducive to building problem-solving attitudes or skills; the main problem the students solve is to give the answer the teacher wants or the answer which the book gives. Also, students do not learn self-appraisal techniques because the teacher does most if not all the appraising.

On the positive side, the possibility exists that (1) some students may learn a correct answer from the person reciting, (2) the student who knew the answer already (the method will not work if no student knows the answer) may remember it somewhat longer because of having recited it orally, and (3) the student may study the assignment more diligently because he knows that he may be asked to recite answers to five or ten questions during a twenty-minute recitation period. If short, fast-moving reviews of factual materials such as foreign language vocabulary, characters and plot of a story, and mathematical processes are classified as question-and-answer recitation, then some of these values may be achieved. Generally, question-and-answer recita-

tion fails with many students. Supervised study may be employed to achieve objectives more efficiently and at the same time gain other important educational objectives.

SUPERVISED STUDY

In a supervised study period the students work on teacher-made assignments or on student-initiated work activities. The teacher helps each student with difficulties encountered in his work. In many classrooms half or more of the instructional period is used for supervised study, the remainder for discussion, explanation, and the like. Sometimes the procedure is called directed study. The two terms are used synonymously in this discussion.

Supervised study has been found one of the better teaching techniques; it provides for individual differences and at the same time helps students to develop individual skills and work methods. The technique is employed quite widely in situations where the teacher attempts to keep the whole class working on closely related assignments. Because many students appear to profit little from out-of-class study, the supervised study period during class time has gained prominence, and assignment methods in supervised study have emerged to meet the characteristics of different groups.

The Common Assignment. In classes where achievement is relatively equal among students, a common assignment to the class may be made. The teacher makes the assignment and the students begin work individually. Frequently where silent reading is involved as part of the study, the teacher passes out a mimeographed list of questions or study guides for the students to follow. These guides may be written on the board. As the students encounter difficulties in their work, the teacher helps individuals. The help supplied by the teacher should be both diagnostic and appraisal in nature so that difficulties are identified and methods are developed to overcome them. Giving students correct solutions is poor use of supervised study time.

Carefully directed assignments may be useful in assisting the students to read charts and maps, get meaning from paragraphs, identify key ideas in a total assignment, identify strange words, organize a total assignment into a meaningful pattern, and the like. Usually students com-

plete assignments at different rates; therefore, assignments differentiated according to achievement level are often used.

Achievement-Level Assignments. In such subject areas as English and arithmetic, we anticipate that the students will vary considerably in achievement at the beginning of a unit or class and that differences in achievement are likely to increase with effective instruction. To provide for initial differences and also to provide for unequal rates of progress, differential achievement-level assignments may be made on a daily, unit, or longer-term basis.

In the daily assignment in arithmetic the technique is to set up a supervised study period of equal length for all students. The assignments include problems for all students in percentage, ratio, or fractions—whatever the particular process under investigation is. These assignments vary not only in difficulty but also in kind. Thus, for the low achievers, the problems on percentage are stated very simply and deal with concrete situations whereas those for the advanced students include a few which are easy and many of an abstract and difficult nature.

In a unit assignment in American literature the same general provisions as those outlined for the daily plan operate. For the slower students easily read, easily understood, and relatively shorter selections are included while the more advanced are assigned essays, drama, novels, longer poems, and the like. A common core of readings for all students may be included to provide a common background for whole-class discussion and dramatization. Such core should be selected to meet the average reading achievement level and anticipates that the faster students have other challenging activities in which to engage and that the slower need considerably more individual help from the teacher.

As may readily be surmised, the teacher's task of organizing assignments in three or four difficulty levels while yet providing a core of common activities in which the whole class participates is time consuming and difficult, and requires thorough acquaintance both with the characteristics of the students and with the materials.

It should be clear that in the differentiated achievement-level assignment the teacher assigns according to best estimate of the achieve-

ment level of students. The students must complete most of the assignments, or the method does not work.

Flexible Assignments. Some teachers prefer to set up flexible assignments which place considerable responsibility upon individual students to choose from among various activities according to their interests and abilities. This arrangement approaches the procedure previously described in Chapter 7 for setting individual objectives in that students choose activities according to their own appraisal of anticipated performance.

The flexible assignment, to work effectively, must incorporate a broad range of assignments and must provide for student initiative in selecting activities. In a unit in American literature where the achievement-level assignment is used, the better students are required to read a novel, two short stories, two poems, an essay, and a modern play. Using the flexible assignment, a list of novels, short stories, poems, essays, and modern plays is presented by the teacher; students may suggest others. Each student then selects from among them and reads as many as he chooses. The teacher may arrange for students to read the same type of literature simultaneously. During the supervised study period the teacher helps students with improving method of attack in reading a particular type of literature, with developing guides for getting main ideas, with organizing methods for using reference materials, and the like. A common core of assignments may be required for all students.

You note that all the illustrations of supervised study above are drawn from separate-subject classes. The supervised study technique is a product of educators' attempts to provide for individual differences. The method arose at a point in educational history when the separate-subject curriculum and the individual development objective were stressed in secondary education. Supervised study is still an effective technique in separate-subject courses. Further, when used expertly and judiciously, it serves useful purposes in many types of course organization.

TYPES OF GROUP ACTIVITIES

The number and kind of group activities which may be organized within a class are extremely wide and varied. As a daily activity, one

teacher may divide a geometry class into groups of four members each and assign a problem or problems to each group for solution and discussion. The teacher of woodshop may help an advanced class plan to build a house, and during the year the group builds the house. The effectiveness of any kind of group activity depends upon the extent to which it achieves an important instructional objective and upon the teacher's skill in organization and direction of group work.

In previous chapters numerous illustrations of group activities have been examined as initiatory, developmental, and culminating activities for units of work. For the major part, project and problem-solving types of group work were cited. In the remainder of this chapter, group activities which are designed to secure information—informal discussion groups, field trips, and committees to use text and reference sources—and group activities which are designed to present information—forums and debates, panels, formal dramatization, and sociodrama—are examined.

GROUP ACTIVITIES TO SECURE INFORMATION

Frequently, a whole class divided into committees or operating as a unit may secure more information than can students working individually. Obtaining information to get a project or problem-solving type of activity under way, to arrive at conclusions, or to build generalizations is an important part of school learning. Informal class discussion is an excellent technique for securing information of this type.

Informal Class Discussion. Whenever students share in deciding what they will do, how they will do it, and when it will be done, informal group discussion led by the teacher is the best method for gaining the needed information. To make intelligent decisions concerning how a class may proceed most effectively requires that all members of the class participate in discussing the problems.

Consider a concrete example. In a tenth-grade history class the teacher and students consider keeping up with world events a worthwhile educational problem. In informal class discussion the teacher and students discuss how such information will be obtained, how much time will be devoted to it during each week, how it is related to their study of history, and how data obtained will be presented to the whole class.

With most class members participating, it is decided to divide the world into major geographical subdivisions. Each student lists the three regions in which he is most interested. On the basis of this choice, six committees are formed. During the week, each committee is made responsible for putting pertinent information concerning a subdivision on a designated area of a very large display area of the room. On Friday of each week, whole-class discussion of the display is carried out, and each committee selects one or two members to present to the class a verbal description of the more significant events which occurred in an area. Whenever a student representing some other area has found material not already included in the report, he presents this information.

In this situation, had there been no opportunity for students to discuss characteristics of the problem, methods for securing materials, sources of information, and quality of the graphic and oral presentation on Friday, the interest of the class members and the amount of information gathered and made available to the group would have been considerably lessened. The teacher, of course, had considered the whole project quite carefully and was able to arouse participation in the discussion by posing significant and thought-provoking questions like "How is history being made today?" "In what areas of the world today are significant historical events occurring?" "How could we as a class get a better understanding of current world events?" "How can we keep everyone in class informed of what we discover in our groups?"

Informal class discussion does not usually arise on the basis of chance without consideration of effective discussion techniques. Student progress in discussion techniques does not proceed without teacher direction and guidance. To get discussions started, the teacher must phrase thought-provoking questions which are related to the topic or problem under investigation. To assure student progress in discussion techniques, the teacher must help students appraise the relevance and importance of contributions, the adequacy of expression, and the quality of respect shown to ideas expressed by others. An informal class discussion should draw from the students these general guides for carrying on intelligent discussion:

1. Secure acknowledgment from the chairman or teacher before speaking.

2. Make statements related to the problem.
3. Be courteous and respect the rights of others.
4. Phrase questions carefully and clearly.
5. Speak clearly so that everyone hears.
6. Listen attentively to the speakers.
7. Contribute your share but avoid monopolizing the discussion.
8. Defend your statements and ideas when supported with facts but avoid arguing.

9. Enter a discussion expecting to learn from your classmates.
10. Recognize that most of the major problems of living together are solved by groups of people who try to work them out together.
11. Take written notes of points with which you disagree or which are new.

12. Take responsibility for summarizing a discussion when you feel it will help get the whole group thinking more clearly.

Usually a circular or semicircular seating arrangement is far superior to any other in keeping the attention of the whole group on the discussion. Requiring students to rise to make a contribution impedes rather than facilitates discussion. It is necessary, however, in groups of ten or more for a student chairman or the teacher to recognize students as they wish to speak.

The teacher who gets a class to the stage of development where they appoint a chairman to lead an informal discussion through which they arrive at a better understanding of how to proceed, a summary of important conclusions, or a clearly defined statement of differences, has made an important contribution to promoting and forwarding our democratic way of life.

Field Trips. One of the better methods for securing information about the geography, history, public health, recreational facilities, vocational opportunities, governmental services, music, or art of a given community is through field trips. Usually, field trips or educational excursions are made by the class as a group in order that necessary teacher supervision may be provided. However, when students become vitally concerned with a problem, they go into the community to secure needed information outside of school hours and assume responsibility for their own conduct.

Field trips must be carefully planned and executed, else little purposive learning occurs, and a trip may lead to serious misunderstanding between school and community. When field trips or excursions are undertaken frequently, as in making a community survey, special emphasis must be given to planning which takes into account the community persons involved.

In planning a field trip, the teacher should give careful consideration to (1) deciding the probable educational values of the trip, (2) making necessary arrangements with the person or groups responsible for the place being visited, (3) making necessary arrangements for transportation, (4) making arrangements with the school principal concerning the trip, and (5) preparing the students to conduct themselves decently and to secure specific information. This latter aspect of planning needs further clarification.

If we want students to secure needed information on a field trip, the information to be obtained must be related to class work. A teacher-led class discussion may be carried out in which these things are done: (1) The need for the trip is established; (2) the class is oriented to the situation; (3) a set of guide questions to be answered is formulated; (4) a procedure for recording the information while the trip is under way or immediately thereafter is outlined; and (5) a procedure for appraising the information obtained is clarified. The latter step is frequently overlooked in planning the trip. It is extremely important, however, because students will look for information and record it more efficiently when they know how it will be appraised.

A teacher-led discussion proves effective in controlling student conduct on field trips. Students should formulate with the teacher standards which will be followed related to (1) conduct while proceeding to and from the designated area, (2) asking questions of the guide, (3) following instructions of the guide and teacher, (4) listening attentively, (5) remaining with the group, and (6) not interfering with the activity under observation. If students are not willing or are unable to exercise sufficient control and judgment in the classroom to outline a reasonably adequate statement of standards for conduct, it is likely that the field trip will be hazardous for everyone concerned. Further, if specific visiting procedures have not been worked out carefully with

the person in charge of the large city post office, the industrial plant, or the printing firm which is being visited, the best-behaved group of students will profit little from the trip.

Throughout the nation, high school students are making long-term community surveys and are traveling thousands of miles on extended trips. The educational benefits are generally considered of significant value in building better understanding of the community, developing student responsibility for own actions, and bringing school and community programs into closer relationship.

Committees for Studying Text and Reference Materials. In classes having a considerable range of student ability to use a basic text, some teachers employ small committee work to good advantage. For example, students in a geometry class are divided into work groups of three or four members of relatively unequal ability. The teacher assigns to each committee a number of problems to solve; they may be the same for each committee. The students work the assignment together, using the blackboard and other available materials. The same procedure is used in other classes in mathematics, science, or English composition when the teacher follows a basic text which has been organized to fit a pattern suitable for daily work assignments.

In such classes as social studies and literature, where the basic text is organized into units with several chapters in each unit, the class is frequently divided into committees to work on specific chapters. In this manner considerable information is obtained in a relatively short period of time. Various types of oral, written, and graphic presentation methods are used for committees to report to the class.

In studying a topic or problem where examination of reference books and current sources of printed information is used, committees are frequently organized within the class to secure needed information. Each committee assumes responsibility for investigating one aspect of a topic or one type of source materials. In this way, much more information may be obtained than is possible through individual study in the classroom.

The chief criticisms of having students work together on an assignment are as follows: (1) The better students are held back by the slower; (2) one student does most of the work; (3) the students do

not learn how to study and work individually; and (4) the classroom becomes noisy. It is true that all of these conditions exist in poorly organized committee work. To avoid them, sufficient teacher-student planning must be undertaken so that students (1) recognize their responsibility to the committee and class for doing a fair share of the work, (2) share in deciding what to do and how to do it, (3) decide upon guides of conduct for committee work, and (4) develop techniques for appraisal of individual contributions to the committee and committee contributions to the class. Whether the better students should help the slower is an unanswered philosophical problem. However, civilized group life is based on the assumption that the strong help the weak; anarchy flourishes in group life based on survival of the fittest.

Every teacher who has two sections of the same class which are relatively equal in achievement (this may be ascertained by comparing initial test scores) should conduct an experiment to discover the relative merits of individual and committee methods of instruction. Administer an achievement test at the beginning and end of a grading period. In one section use individual work for the major part as the information-getting technique and in the other use committee work. Keep other factors constant—films used, discussions held, explanations made by the teacher, etc. At the end of the grading period compare results of the two sections in achievement, noting especially the average or mean score, the range in scores, and the amount of progress the highest and lowest students have made. At the end of the grading period have the students in each section demonstrate their ability to work together in planning a class party, a field trip, or some other activity. Evaluate the effectiveness of the two groups on this criterion also. Until more teachers carry out experiments of this kind, the problem of using individual work or group work as described in this section will remain unsolved.

GROUP ACTIVITIES TO PRESENT INFORMATION

Discussion groups to present information vary considerably with respect to (1) formality of interaction among members, (2) number of members, (3) ability of the members to present information, (4) amount of information possessed by individuals, and (5) leadership in

the group. Depending upon the outcomes sought in a class and the characteristics of individuals in the class, various procedures in organizing presentation groups may be followed.

Forum and Debate. Both the debate and the forum are quite formal types of discussion and assume that the persons who participate have a considerable amount of well-organized information which is worth presenting to a group. In the forum of two or three members each student makes a formal presentation. The chairman or moderator directs questions raised from the floor to the forum member who has pertinent information. The discussion is usually between two persons, and there is little informal discussion among forum members or between the class and forum members. Frequently the forum member, because of the amount of time given to preparation of his formal presentation, feels he must defend his point of view rather than accept contributions from class members. As an information-presenting technique, the forum is valuable to the extent that the members have information, present it clearly and intelligently, and are able to do so more effectively than can the teacher or students in other types of presentation.

The formal debate has been discontinued to a great extent, mainly because few students have the necessary language and presentation abilities to participate effectively, because the desire to win overshadows the methods used, and because debate assumes that there are two sides to a question, one of which may be proved correct. Debaters often appear to spend more effort to discover weaknesses of their opponents and to obtain information which supports a point of view than they do to arrive at a reasonable solution of the stated problem. It is entirely probable that few high school students are able to find a solution to a problem or to think more clearly about it through listening to excellent debate teams.

The British-style debate, based upon House of Commons parliamentary procedures, brings the audience into the debate. A problem is formulated and the affirmative and negative speakers make a five- to eight-minute formal presentation. After this a second member from the affirmative and negative teams presents a shorter talk and may yield to a question or contribution from the floor. When this phase is finished, speakers from the floor may make numerous contributions or

raise questions directed to a debater or to an audience contribution. These contributions must, however, be in affirmative-negative sequence so that an equal number of persons representing each side of the question are allowed to speak. Finally, a speaker from each side makes a summary presentation, after which the audience may again participate.

As a technique for eliciting audience interest, participation, and identification with the problem, the British style is far superior to the more formalized style. An interesting way in which this type of debate may be adapted to classroom use for arriving at solution of the problem is to limit the debate to one-half of the class period and to use the remaining time for whole-class discussion of facts or points of view expressed.

Panel Discussion. A class may be organized into committees of four to eight members to secure and analyze information and then to present facts, generalizations, and conclusions to the rest of the class. One way in which a panel may be organized is to have each student make a short formal presentation which relates to the problem or topic under investigation. Another method is to have the chairman state the topic or problem, to be followed by panel members responding informally. The more informal procedure tends to produce less excited or matter-of-fact reading of written reports and more contributions directly related to the problem or topic.

The chairman of the panel has much responsibility for its success. With a class unaccustomed to preplanning panel discussions and unacquainted with panel procedures, it is advisable for the teacher to act as chairman of the first panel which is conducted. Here are the main jobs of the teacher in planning a panel:

1. Conduct sufficient whole-class discussion of a topic to make sure that the students understand the problem clearly and are interested in getting and presenting information.
2. Help the students select a chairman to guide the group in securing information.
3. Help the chairman and group members to apportion responsibilities for securing information and devising graphic aids and demonstrations which facilitate the presentation.
4. Help students to develop guides for recording information.

5. Help students, in committee meetings, to develop a conversational style of presentation.
6. Help the chairman and students develop a presentation plan so far as each member's specific responsibility for an area of information is concerned.
7. Help the chairman to plan his presentation:
 - a. A clear statement of the problem or topic and brief introductory remarks to the class.
 - b. Introduction of panel members and their areas of specialty.
 - c. The first question to get a panel member's response.
 - d. A method for receiving questions from the floor.
 - e. A method for bringing all members into the discussion.
 - f. A method for summarizing as it is needed.
 - g. A method for keeping the discussion on the topic.
 - h. The closing remarks.
8. Help the panel by working out with the whole class evaluation techniques related to:
 - a. The clarity of the discussion.
 - b. The relevance of materials presented.
 - c. Individual student's effectiveness of presentation.
 - d. The effectiveness of the chairman.
 - e. The conduct of the listeners.
 - f. The appropriateness of contributions from non-panel members.

Tape recordings of a panel discussion when played back serve excellently for evaluation purposes.

Formal Dramatization. Adolescents frequently enjoy presenting information in a dramatic manner. Radio skits may be prepared by a group and presented to the class. In a unit on vocations in the senior high school a group of students studied job opportunities in the community. They interviewed hiring officials of various companies, a governmental agency employment director, labor union officials, and an Air Force recruiter and secured other information from college bulletins, Department of Labor publications, occupational reference books, and the like. After securing the information, the committee presented the information in a radio skit. One student acted as master of ceremonies; other students played roles of officials of a manufacturing industry, a distributive occupation, and a governmental agency, an Air

Force recruiter, a union representative, and a college dean. The script was carefully prepared with the assistance of the teacher. Each student read his lines. Radio skits of this type may be used in many different classes.

Dramatizations which are planned and written by students help them secure information for a definite purpose, check the accuracy of facts, and develop skill in written and oral expression. For most instructional purposes, memorizing a script is not worth the time required. Elaborate preparation for dramatizations is a major objection to widespread use of the technique. The extent to which the audience may participate is also a limiting factor.

A group technique of recent origin which overcomes most of these objections is the sociodrama.

Sociodrama. Sociodrama is unrehearsed dramatization. In sociodrama, students play various roles using only their presently available information concerning how the roles should be played. There is no preparation of script, no rehearsing, and no reading of materials. Generally, sociodramatic presentations are taken from problems arising in informal class discussion about social problems. However, sociodrama may be adapted to a variety of situations. Examine how it may be used in three different situations.

A class decides to give a party not yet included in the school's crowded social calendar. Someone from the class must secure approval from the girls' adviser. What should the student say to the adviser? The teacher discusses the situation briefly with the class. Class members suggest that a student may approach the adviser timidly, aggressively, or in a straightforward, gracious manner. They decide that the teacher's desk and chair may serve as the adviser's office. A student volunteers to act as the adviser and others agree to play the other roles. Each role-playing student steps outside the class for a minute or two to decide how to play his part. The remaining students are asked to watch the roles played. The scenes are then dramatized. As a class member suggests how a role might be portrayed more effectively, the teacher suggests he take the role. In groups accustomed to sociodrama, this replacement frequently occurs. Following the sociodrama presentation there is

a general class discussion, and a student is selected to secure approval from the adviser.

Here are situations similar to the one just described where socio-drama works well: an applicant interviews an employer, a student interviews a community person to secure information, a salesman approaches a customer, a boy asks a girl for a date, a high school sophomore secures parental permission to attend her first school dance, a student discusses a test score or semester mark with the teacher, and a student introduces a teacher to his parents. In all these situations, students playing roles of shy, aggressive, and well-mannered individuals give reality to the situation which helps them to learn the preferred way. It is certain that when students play the roles easily and graciously in the presence of the teacher and classmates they are able to meet the actual situation with greater ease and confidence.

Restricted housing is a problem in many communities. High school students should be able to play roles which represent community attitudes toward restricted covenants. Classroom space is arranged as a real-estate office. One student plays the role of Mr. Green, the father of three children who is unable to purchase a home which he desires. Another student becomes Mrs. Summers, the real-estate agent. A third personifies Mrs. Dayle, who strongly favors the restricted covenant and wishes to buy the same home as Mr. Green. In this situation, students play the roles and actually identify themselves with the characters. Mr. Green becomes vitally concerned with finding a home for his children. Mrs. Dayle is upset because Mr. Green has considered buying the property; she resents Mrs. Summers' having allowed Mr. Green in the office. Mrs. Summers is mainly concerned with preventing violence. Restricted covenants become live issues in the thinking of the players and audience.

After a class has studied a short story, novel, drama, or historical event, a situation is arranged which involves the leading characters in a climactic situation. The situation is discussed briefly, the setting is arranged, the main characters are identified, and students are selected for various roles. Each student playing a role indicates his attitudes toward the character, his understanding of the character, and his information

concerning the plot. The student audience also becomes involved with the characters, for they, too, have ideas about how the roles should be played and possess pertinent information concerning the plot. More than any other type of group presentation, sociodrama gets students involved in the presentation.

In organizing and directing sociodrama for the first time, these suggestions may prove useful guides:

1. Select a situation which is quite well understood by the class. Generally, the situation arises from informal discussion where problems involving group interaction are significantly related to the topic being studied.
2. Take sufficient time to set up the situation so that the scene and roles are understood by all members of the class.
3. Emphasize these ideas: the student is playing a role; he is not portraying his own feelings and attitudes; he is not supposed to act as he really feels about the situation.
4. Attempt to fill the roles with students who volunteer; in case none do, select students whom you know are not shy or easily upset.
5. Prepare the nonparticipants for observing. An effective technique is to state simply: "Notice how Mary and John carry out their roles. If you would play a scene differently, you may do so after they finish. Give Mary and John the same kind of treatment now which you want from them when you play a scene."
6. Interrupt a student, if necessary, when he is out of role or incapable of carrying on intelligently. Frequently, students who attempt to overcome feelings of insecurity with braggadocio volunteer but become inadequate or helpless in the situation.
7. Get other students to play roles after the first group has finished.
8. Anticipate a considerable amount of student nervousness when playing a role for the first time.
9. Use a short class discussion to summarize sociodramatic presentations when such is feasible.

Some of the more important values derived from sociodrama include high student interest, complete student attention to the presentation, better understanding of own and others' attitudes toward a given problem situation, deeper insight into a social problem, more careful

preparation of materials which may be dramatized, definite growth in social interaction skills, and a high degree of transfer of learning to the actual situation which is being dramatized.

With sociodrama, as with other individual or group activities, the outcomes sought, the characteristics of the group being taught, and the skill of the teacher determine when and how it may be used most effectively.

SUMMARY

Instructional methods are organized for the purpose of helping students to become competent individual performers and socially conscious citizens who actively participate in the groups to which they belong. Both individual work and group activities are needed to achieve these objectives, and appropriate teaching methods must be devised to make any classroom activity a meaningful learning experience for the students. In deciding to use individual or group work, the teacher must consider (1) the objectives sought in the class, (2) the relationship between the objectives of this class and the objectives of the whole school, (3) the characteristics of the group, especially their ability to profit from one or the other kind of work, and (4) the nature of the learning task. The usual answer to these problems is that no one activity is superior to another in all cases; instead there must be careful balance of individual and group work.

Lecturing and question-and-answer recitation are relatively inefficient instructional methods. Their widespread and continuous use is to be avoided in most secondary classrooms. Supervised study may be adapted successfully to many classroom situations. How assignments are made, the adequacy of study guides which the students use, and the teacher's attention to the students' work largely determine the success of supervised study. Common assignments made to a whole class, differential achievement-level assignments made to groups within a class, and flexible assignments wherein students share in deciding what to do may be employed to meet varying needs and abilities found in different classrooms. Supervised study is especially useful in helping students to develop individual skills and work methods; it is not useful for building social skills.

The number and kind of group activities which may be carried out in a class are extremely wide and varied. Informal class discussions, field trips, and committee analyses of texts or reference materials are frequently more efficient than is individual work to secure information. The forum, debate, panel discussion, formal dramatization, and socio-drama may be employed advantageously in analysis and presentation of information. The British-style debate, panel discussion, and socio-drama are especially useful techniques for directing the attention of a class to the presentation and for stimulating serious class consideration of the information presented.

QUESTIONS AND ACTIVITIES

-
1. Select several important learning outcomes related to your area of teaching and decide which could best be developed through individual and through group work.
 2. How does the method employed in assigning students to sections and classes affect the use of individual and group work?
 3. Appraise the Dalton plan, the Morrison method, and the Kilpatrick project method as each applies to an area of instruction in which you are interested.
 4. Evaluate the strengths and weaknesses of these instructional techniques: (a) lecturing, (b) question-and-answer recitation, (c) supervised study, (d) common assignments, (e) achievement-level assignments, and (f) flexible assignments. Which appear to be best suited to your instructional purposes?
 5. Arrange a group for an informal discussion of item 4 or some other problem. Are the twelve guides listed for informal discussion adequate? What changes are needed?
 6. Outline minimum teacher preparation for conducting a field trip.
 7. What are the chief objections to committee work in the classroom? What values may accrue?
 8. List the major strengths and weaknesses of the following techniques for presenting information: (a) forum, (b) debate, (c) panel discussion, (d) formal dramatization, and (e) sociodrama.
 9. Conduct a sociodrama in which three teachers in social studies or

English meet with the principal to discuss improvement in teaching methods. One student plays the role of an experienced teacher who favors individual work, another favors group work, the third is a teacher new to the school who wants help, and the fourth is the principal. Are the nine guides for organizing and directing sociodrama adequate?

10. If you desired to change the attitudes of a group of high school students toward what is appropriate conduct in the classroom, what methods or techniques would you employ?

REFERENCES

-
- Douglass, Harl R., and Mills, Hubert H., *Teaching in High School*, New York, The Ronald Press Company, 1948, chaps. 10, 12, 18.
- Kinney, Lucien B., and Dresden, Katharine (eds.), *Better Learning Through Current Materials*, Stanford, Stanford University Press, 1949, chaps. 5, 6.
- Mendenhall, C. B., and Arisman, K. J., *Secondary Education*, New York, William Sloane Associates, 1951, chap. 4.
- Schorling, Raleigh, *Student Teaching*, New York, McGraw-Hill Book Company, rev. ed., 1949, chap. 7.
- Spears, Harold, *The High School for Today*, New York, American Book Company, 1950, chap. 10.
- Symposium, "Meeting the Needs of the Whole Child Through Group Participation," *Teachers College Record*, February, 1949, pp. 295-302.

Using Instructional Materials Effectively

Students want to learn how a motion picture is made. How may instructional materials be used to help them understand the process? A field trip to a movie lot may be arranged to provide direct visual experience. Students may dramatize the process or enact part of it in a sociodrama. The teacher may suggest readings in the basic text, reference books, or current magazines and newspapers. A sound film explaining film production may be used. A film without sound or film slides may be shown with teacher explanation and class discussion of the various steps and processes in film making. The teacher may attempt to explain the process without using any visual materials; the students may organize a panel discussion for the same purpose; or they may listen to a radio program or recordings which dramatize film production.

Depending upon the nature of the concept, process, skill, or attitude to be learned, the teacher selects those instructional materials which make the learning activity most meaningful for the students. In many classes visual, auditory, and audio-visual aids to learning are used in combination with direct first-hand experiences with the process and second-hand experiences gained through reading. Because of the presence of many kinds of instructional materials and their widespread availability, teachers must make judicious selection of materials and use them appropriately. Appendix A (see pages 491-498), for example, contains a list of instructional films available for classroom use in connection with this book.

READING MATERIALS

In many secondary classrooms throughout the United States a basic text is used; supplementary texts, reference books, encyclopedias, and atlases are located in strategic places; workbooks or other printed instructional materials are used by the students. Any of these materials may be used to excellent advantage; also, the teacher and students may become the slaves of printed pages. Which occurs depends upon the methods used by the teacher in selecting instructional materials and directing student use of them.

THE TEXTBOOK, TEACHER'S MANUAL, AND STUDENT WORKBOOK

Some educators recommend discarding most textbooks in the secondary school. Others are working to improve textbooks, teacher manuals, and student workbooks which accompany texts. Whether or not to use a text in a class and how extensively to use it depends upon (1) the nature of the class, (2) the familiarity of the teacher with the subject field, including sources of student information and their immediate availability for classroom use, (3) the teacher's ability to organize instructional materials efficiently, (4) the characteristics of the group being taught, and (5) the utility of the text itself. One brief statement illustrates each of these points.

One would probably use a text in a beginning typing class but not in a physical activity class. A teacher with a major in English and no college work in mathematics would undoubtedly use a text in eighth-grade arithmetic. A beginning teacher who had never organized a sequential series of units for a semester's work in United States history undoubtedly would profit from following the organization of a basic text. A group of very slow students in eighth-grade English would probably become confused if required to examine a variety of sources of information concerning how to write a business letter whereas a superior group would profit from such a requirement. Some texts are more useful than others for separate-subject classes; as yet, few texts have appeared which are particularly adapted to a course combining English, social studies, and science. Wherever a text is used, care should be exercised in its selection and use.

Selecting a Text. In various classes in a few schools teachers may use whichever text they wish or none. In more schools the individual teacher does not select the text but must use the one recommended by an official group representing a local school district or the state education department. In many schools textbook committees which include teacher members recommend textbook adoptions to these officials. Wherever a teacher has opportunity to help in the selection of a text, these suggestions may serve as useful guides:

1. List the major objectives of the class.
2. Outline the major units or topic areas to be included in the class.
3. Examine publishers' catalogues to find texts recently written and request the school to secure those which look promising. (Frequently, textbooks are bought by the school and placed in the library for student use and teacher inspection.)
4. Examine the texts to ascertain which of them meet your objectives and unit organization for the class.
5. Examine the texts to ascertain probable utility related to:
 - a. Quality of paper, printing, cover, binding.
 - b. Quality and number of graphic and pictorial aids.
 - c. Quality and number of such aids as bibliographies, film descriptions, self-evaluation devices, proposed problem-solving activities for individual students and groups, study guides, etc.
 - d. Difficulty of vocabulary employed.
 - e. Attractiveness and readability to students. Have students of average, low, and high achievement read different authors' discussions of the same topic or problem. Ascertain which is most interesting for them. (It is surprising how often teachers' and students' estimates of texts disagree.)
 - f. Accuracy of information. Read discussions of the same topic in the different texts. Check accuracy with reference sources or have other teachers read the same accounts and evaluate them.
6. Select the text you will use or recommend several with your evaluations to the textbook-adoption official or committee.

This selection procedure, when carried out systematically every two to five years for each course, helps in keeping up with a subject-matter field, in getting ideas for better organization of units, topics, or problem-solving activities, in securing more and better supplementary ma-

materials, and in recognizing difficulties which students encounter in using one basic text in the classroom.

Using a Text. Examining a text or a part of it wherein varied activities and suggested materials are outlined may constitute a most worth-while initiatory activity in any class where a basic text is used. Also, the teacher may get many suggestions for class activities from a text. Generally, assignments in a text need a teacher introduction which establishes purpose for the assignment. Usually purpose is not established merely by assigning pages to be read or problems to be worked. In a general science class, after appropriate preparation procedures, a field trip is taken to an ocean beach. Students collect various specimens of animal life. Certain of these are used for study in a given unit. Decision is made concerning which specimen will be studied first; then students locate text information which helps them to identify specimens more accurately, to learn more facts about classifications, to check the accuracy of the classifications, and to develop various skills in microscopic examination, dissection, and analysis of animal anatomy and physiology. The text thus serves a definite purpose.

Before any assignment is made in a text, the teacher should help the student become acquainted with general features of the text and some specific facts about its organization and methods of presentation. Students should know how the book is organized into units and chapters; how key ideas are presented in boldface type, italics, etc.; the purpose of introductory paragraphs in chapters and of chapter summaries; and the guides for use which the author presents in a preface or introduction. As the text is used, students should be taught how to interpret charts, graphs, and tables, how to organize the text materials to facilitate understanding and recall, and how to master new terminology. If they are unable to do most of these things efficiently, they will not use a text to good advantage.

When students represent a wide range of interest patterns and achievement levels, as is the case in most classrooms, it is extremely difficult to use a single text as the only source of printed material to be studied. Quillen and Hanna cite "the chief defects in textbook teaching in the social studies, by which is meant some form of question-and-answer recitation based on the reading of a single text":

1. It is deadly to the good student to follow textbook reading with a discussion in which no new material is introduced.
2. It is impossible to find a single text suited to the interests and abilities of all the students in the group.
3. It does not encourage the development of initiative and self-direction to assign students three or four pages in a textbook.
4. It limits the scope of the course and does not encourage students to work up to their maximum ability.
5. It encourages belief in the infallibility of the printed page and reliance upon a single authority.
6. It provides little opportunity for students to compare and evaluate different points of view and develop critical-mindedness.
7. It encourages bad reading habits in students and rote memorization.
8. It tends to routinize procedure—so many pages to be read followed by recitation and a quiz on what was read.¹

These authors recognize the values of excellent use of the textbook in social studies classes. Douglass and Mills cite the following values which an excellent text may provide when used by a superior teacher along with other instructional methods—readings, lectures, discussions, problems, visual and auditory aids:

1. It furnishes an outline which the teacher may use in planning the work of a semester or the year.
2. It brings together in one volume a great deal of the more important information in a given field.
3. It usually contains some serviceable teaching aids, such as pictures, charts, diagrams, questions, problems, maps, summaries, outlines, headings, exercises, and table of contents.
4. It serves as a permanent record for future exercises later in the course, e.g., reviews.
5. It saves the teacher much time in presenting materials or finding material for students to read in the library.
6. It enables the learner to take home with him in convenient form some of the more important materials for study.
7. It facilitates the making of assignments—though often assignments of inferior grade.

¹ 1. James Quillen and Lavone A. Hanna, *Education for Social Competence*, Chicago, Scott, Foresman and Company, 1948, p. 242.

8. It provides a uniformity in the learning materials of pupils which is desirable to some degree, particularly for the purposes of class discussion and testing.

9. It provides a logical organization, though by so doing it deprives the learner of the responsibility for organizing and hence the educational training involved.

10. It relieves the teacher of responsibility for evaluating much of the material of the course; more time is thus made available in class for discussions, explanations, assignments, the use of visual aids, and other activities.

11. It unifies the study of the class around a definite specific topic.

12. It avoids the confusion which may result from the attempts of pupils to organize a mass of facts from various sources.²

Now recall the five criteria listed in the introductory paragraph for deciding whether to use a text and how extensively to use it. Do they appear adequate? What changes would you make?

Teacher Manuals Accompanying Texts. Many series of textbooks for the elementary school have accompanying teacher manuals which are intended to help the teacher use the text to best advantage. Some series of texts in arithmetic, language, and science are now extending into the high school. Teacher manuals for use in high school are being published in quantity. A teacher's manual for a seventh-grade science text³ and for a correlated student workbook follows this organizational pattern:

1. A discussion of how to use the manual, text, and companion book, or student workbook. This includes a listing of the units in the text, page number of units, and suggested number of one-hour periods to spend on each unit.
2. A discussion of the sequence for developing science skills.
3. A description of the science room, including suggestions related to how and where to secure equipment and supplies.
4. A summary of techniques for using various sources of visual information such as field trips, slides, films, experiments, etc.

²Harl R. Douglas and Hubert H. Mills, *Teaching in High School*, New York, The Ronald Press Company, 1948, pp. 293-294.

³Donald G. Decker, *A Teacher's Manual and Science Handbook to Accompany How and Why Explorations*, Book VII of the How and Why Series, Syracuse, The L. W. Singer Company, 1948.

5. A list of specific teaching methods—questions to be asked, materials to be used, etc.—for each unit in the text, correlated with exercises in the student workbook.
6. A bibliography for teacher and student use.
7. Answers to exercises in the student workbook.

Teachers may use this *Teacher's Manual and Science Handbook* to secure information concerning specific science teaching methods, sources of science materials, equipment, and supplies, and organization of subject matter into teaching units. Rigidly following the time schedule of assignments in the text and student workbook is probably unwise. This same statement applies to any teacher's manual. In general, following a teacher's manual or a detailed course of study, which frequently is a statement of pages in the textbook to be completed at given dates, leads to (1) little originality on the part of the teacher, (2) little organizational initiative and ability on the part of the teacher, and (3) much reliance on teaching by covering an area of subject matter according to a planned schedule which may be inappropriate for a given group of learners.

Student Workbooks. In which courses may a workbook be used effectively? How may it be used to good advantage? Selection and use of a workbook follow similar procedures to those for selecting the basic text. A good workbook, correlated with a text, may outline interesting and challenging activities for students of various abilities. The exercises may be completed in or out of class.

Workbooks have been written chiefly to help busy teachers who have many and large classes. The workbook provides study materials which the teacher may not have time to organize or produce. These study materials help the individual student to work independently and, when properly used, to proceed at a rate suitable to his achievement level. Some teachers rely heavily on a basic text and accompanying workbook to provide the instructional materials used in supervised study. Sands lists these merits of the student workbook:

1. It presents material in a well-organized form.
2. It is easy for the teacher to make assignments.
3. It is easy for students to work in it.

4. The correction of workbook material is usually facilitated by an efficient organization of materials.

5. Answers to the problems are provided so that either the teacher or student can check the answer.

6. Workbooks may be purchased for less cost than can teacher-produced materials.

7. Inadequate classroom materials, library books, and reference materials may be partially overcome with workbooks.⁴

Were you, while in the elementary school, given picture books to color day after day? Were you ever given assignments in workbooks in which to answer questions you simply found what the book said and then wrote those statements in the workbook? What do children, after having colored picture-book outlines monotonously, do when presented with a blank sheet of paper and crayons or chalk? Can they go ahead on their own? How much does the teacher who has learned to rely heavily on the workbook help the students in the new situation? This technique with student workbooks is the main objection to their use in secondary schools.

REFERENCE MATERIALS

Supplementary texts, dictionaries, encyclopedias, atlases, and other reading materials such as novels and short stories are frequently kept in the classroom. Supplementary texts may be used to provide for differences among students in achievement and reading ability when they are selected for that purpose. Dictionaries and encyclopedias should be available for daily use in all classrooms where reading is one of the principal ways of getting information.

Especially in the junior high school, students should be taught how to use reference books of many kinds. One of the erroneous assumptions frequently made by high school teachers is that boys and girls have learned how to use a wide variety of reference sources while in the elementary grades. It is unjust to make collateral reading assignments to students without first helping them learn how to carry out the assignments. Advanced college students frequently need teacher

⁴ Lester B. Sands, *An Introduction to Teaching in Secondary Schools*, New York, Harper & Brothers, 1949, pp. 275-276.

assistance in using such books as *The Third Mental Measurements Yearbook*, the *Encyclopedia of Educational Research*, the *Education Index*, or *U.S. Census Reports*. Assuredly, high school students should be taught how to use reference books in which assignments are made or from which they secure needed information.

An adequate supply of reference materials and supplementary texts is essential for (1) making education of most worth to superior learners, (2) successfully carrying out projects or problem-solving activities which involve the acquisition and understanding of printed information, and (3) adequately providing for differences among students in reading ability and achievement.

CURRENT READING MATERIALS

The present is more interesting to high school boys and girls than is the past. Most of us adults read newspaper reports about our local school or magazine stories of school events in the nation in preference to textbook accounts of education in colonial times or even during the early decades of this century. Current events, as attested to by the popularity of newspaper and magazine reading, command the interest of youth and adults. Students now in school should learn how to use current materials intelligently because many of the decisions which they make now and in the future are based upon information secured by reading newspapers, periodicals, pamphlets, brochures, etc. These are sufficiently important to examine more closely.

Newspapers and Periodicals. An interesting and extensive investigation in the use of current materials in the classroom was conducted by the California Council on Improvement of Instruction. The study began in 1946 with a suggestion of the Division of Secondary Education of the California State Department of Education that experimentation in increased classroom use of current materials might prove useful. In the early stages, the project was supported financially by Time, Inc. Lucien Kinney, Reginald Bell, and Katharine Dresden of Stanford University served as consultants and provided much of the professional leadership. The California Council is continuing the project at this date.

Use of newspapers and periodicals was included in the investigation.

Some forty-eight classroom teachers throughout California participated in the study as members of the council. They set up various experimental teaching procedures for use of current materials, put their plans into action, discussed their experiences in council meetings, evaluated the results, and reported the findings. Newspapers, periodicals, or both were used in classes in art, biology, chemistry, English, foreign languages, history, homemaking, journalism, literature, mathematics, oral composition, physics, physiology, remedial reading, social studies, and speech. Note how four teachers made use of the materials:

1. Students in an eleventh-grade English class decided to write a biography of a local person as one activity in their study of biography. They agreed to write a biography of a local doctor. Immediately they needed more information about the doctor and about how to write a biography. This was gained by organizing the class into committees which interviewed the doctor and other persons, examined the back files of newspapers, and investigated other biographies. Early in the study, the local newspaper became interested in publishing the biography; so the class members began considering content, style, and correctness more earnestly. This increased seriousness was reflected in the classroom activity and out-of-school work. After all the information had been gathered and analyzed in group discussions, it was assembled, typed, evaluated by the class, sent to the newspaper, and published. Here is a succinct evaluation of the students' work in the teacher's own words, "As authors, the class now discusses, with workmanlike competence, the work of fellow biographers."

2. On the basis of test scores, a group of ninth-grade students who fell below eighth-grade reading achievement were placed in a remedial reading class. These students were also low in knowledge of current events and breadth of reading interests, as discovered in class discussion and by administering a questionnaire and a news quiz. The teacher tried to increase vocabulary, reading comprehension, speed, and interest by using daily newspapers as the basic text. Two newspapers furnished thirty-five copies to the class, each paper making daily deliveries during alternate months. The commonly employed procedure in use of the newspapers was for the students to read whatever they wished, frequently the comics, during the first few minutes of the class. Oral

reading of editorials and political news came next. A variety of methods was used to maintain interest in reading other sections of the paper, to build vocabulary, to outline key ideas in a story, and to read for extended periods of time. The teacher considered the venture a success. When the change was made from one newspaper to the other, the students gave clear indication that they were learning how to use a newspaper.

3. In a United States history class, students gathered information about current events outside of class for the major part and discussed the events for ten minutes at the beginning of each day's work. Student chairmen led the class discussions. Student-promoted activities which originated in these discussions led to debates on Russia's aims and their possible outcomes, on the closed shop, and on other current issues. Also, the students soon began to bring into the class news items about more obscure topics which stimulated interest in wider reading and other discussion techniques. Because of this study of current events, the teacher concluded that the students better understood aspects of United States history such as the development of the Constitution, the extension of political rights, the Reconstruction period, and the like. They became more aware of the importance of understanding history to appraise the significance of current events.

4. Radioactivity came under investigation in a teacher's physics and chemistry classes. The scientific facts about radioactivity and analysis of its social implications were not available in the textbooks, so the teacher and students turned to current sources of information. Facts were gathered from *Fortune*, *Life*, *Newsweek*, *New York Times Magazine*, *Popular Science*, *Science Digest*, *Science News Letter*, *Scientific Monthly*, *Time*, *Vital Speeches*, and *Weekly News Review*. In panel discussions, some fifteen aspects of the topics were analyzed. Consideration was given to the completeness and accuracy of the information. Test results and evaluative discussions of the work showed that the procedure was effective.

These anecdotes illustrate specific uses of current reading materials. There are many other kinds of printed materials which may be secured for classroom use. Among these are bulletins, pamphlets, and brochures which are produced and distributed, free or at low cost, by private groups and governmental agencies.

Reading Materials from Private Groups and Governmental Agencies. Some school principals frown upon classroom use of any free materials distributed by private groups. Other administrators appoint committees to investigate such materials prior to use in school. The private group which distributes information at its own expense usually wishes to create a good feeling toward a product, service, or idea. Thus, bulletins from the Chamber of Commerce may help students visualize the desirable features of a city; those from the Women's Christian Temperance Union may help students understand the less desirable. Both types of information may serve useful instructional purposes. Before the teacher brings either into the classroom, a careful analysis of the organization's objectives, methods of procedure, and specific purposes in producing and distributing the literature, and of the probable effects of its use on teacher-student and school-community relations must be undertaken. Students should learn to evaluate most kinds of information in appropriate classroom situations. Much criticism from students, parents, and the administration may be avoided when the teacher sets up methods for students to bring the materials into the classroom for the expressed purpose of helping them develop standards for evaluating sources and accuracy of information.

The information available at low cost from state and national governmental services continues to increase in amount and kind. The many departments of the national government—agriculture, labor, interior, and state, for example—print bulletins and pamphlets. The governmental publications are designed to be accurate and to represent a total-population rather than a special-interest viewpoint. One may secure information from governmental sources concerning almost any topic he chooses. The Superintendent of Public Documents, Washington, D.C., answers requests about publications, their cost and availability. The various states have officials who provide the same services. In states where an effective department of education operates, a person in that organization assists teachers in securing information about governmental and other low-cost publications.

MOTION-PICTURE AND OTHER VISUAL AIDS

A most significant advance in the effectiveness of classroom instruction has resulted from widespread and efficient use of visual aids to

learning. Reading printed materials, which some authorities classify as visual education, and listening to discussions and explanations are more interesting when supplemented with visual aids because one's understanding of situations, concepts, and processes is more meaningful as he becomes increasingly familiar with the referents. Visual aids help the learner to understand what the printed or spoken words attempt to describe.

Visual aids do not eliminate the need for reading, discussion, and study. They are not adequate substitutes for the many first-hand, direct experiences with situations and processes. They may, however, be used in a variety of classroom situations to achieve these purposes:

1. To bring variety into teaching method which in itself builds student zest for learning and discourages boredom.
2. To promote interest in a situation, concept, or process to the point that definite need for further study is felt.
3. To promote retention. Everyone retains facts, information, or understanding of processes more consistently as he acquires or sees applications in different settings.
4. To provide visual presentations of situations, concepts, or processes which often cannot be studied first-hand or understood well by reading and listening, e.g., a meeting of the United Nations Security Council, the metamorphosis of the fruit fly, or functioning of the human reproductive system.
5. To help some learners who profit little from listening and reading understand concepts and processes which are extremely important in their daily living. The military services demonstrated this use during World War II.
6. To save time of the teacher and of the students since some kinds of learning may be gained visually with less time than any other way.

Some visual aids are more efficacious than others for achieving these purposes. Generally, the motion picture is the best single aid for helping students understand any process involving action which may be animated or dramatized.

THE MOTION PICTURE

The motion picture has characteristics which make it particularly worth while as an instructional aid. In the first place, the camera re-

cords consecutive motions which are observable by the human eye. Various sequences of a process, e.g., formation of canyons by wind and water erosion, may be filmed and then edited so that in a period of ten to twenty minutes the whole process is unfolded. Students viewing a film like this may derive a better understanding of the whole process than may be obtained in several field trips. Second, the camera records action not observable to the human eye. Slow-motion photography, microphotography, and time-lapse photography are used to show photosynthesis in plants, metamorphosis in animals, the explosion of an atomic bomb, or the action details of a quarterback receiving the ball and getting a pass into the air. Again, when such films are edited, sequences of action which occur unobservably or too quickly to be caught with the human eye may be examined closely in relatively brief periods of time. Third, moving pictures are produced for specific purposes: to present information, to demonstrate a process, to modify attitudes, or to entertain. All of these purposes are appropriate in specific school situations.

The Sound Film. As an instructional aid, the sound film has distinctive value in that explanation, dialogue, or narration to assure continuity accompanies the action. Thus, possibility for learning through seeing and listening simultaneously is present. Also, the information presented in educational films is usually authentic; the narration is simple, clear, and correct; and the presentation is usually psychological. Film makers have developed a high degree of skill in presenting action with sound which captures and holds attention. Glenn Frank expressed these values and others after seeing a film on the growth of plants:

Yesterday, within the space of ten minutes, I saw a plant grow to full maturity, bear fruit, and die.

I had to wait forty years to see it, but yesterday the thing I wondered about as a child happened.

I saw the processes of growth as clearly and as plainly as this morning I see motors streaming by in the streets below my Chicago hotel window.

I was not under the delusive spell of a magician.

I was simply watching an education film on plant growth.

A pea was dropped on the ground.

Soon its side burst open and a white sprout, or whatever the experts call it, came peering with manifest curiosity out into the open.

This white sprout turned downward and began nosing about for a way to burrow downward into the soil. It nosed about with an appearance of almost animal sense. Soon it began its downward journey into the soil which had been cut away so the camera could catch the downward journey of the root. I saw the root branch off to the right and to the left.

Then another sprout began to lift its head into the air. It had a little of the look of a dinosaur's head. It seemed almost in pain as it writhed and twisted and unfolded itself. Then came the unfolding of the flower. A bee came to steal its nectar and to catch a cargo of its pollen to carry it, as a kind of traveling salesman to the plant world, to another plant that fertilization might take place.

I saw protoplasm, the stuff of life, racing back and forth in pollen tubes as a mountain stream might leap and foam.

Another pea, dropped on stony ground, tried the same life process. The white sprout peered out of the open side of the pea and began nosing about for a way downward into the soil. But there was virtually no soil. And it seemed to me that the sprout actually grew frantic in its quest of soil. Finally, defeated in its quest of fertile earth, the upward reaching sprouts and branches of the pea began to wither, and death came with something of the jerk of death I have seen when animals and men die.

All of this was NOT a trick representation. It was photography of growth and death. Microscopic and time-lapse photography had caught the slow growth of the pea and then had speeded up the picture to bring the life cycle within the space of ten minutes.

The teacher who is willing to ignore and to let lie unused so amazing a teaching medium as this is either blind to progress or simply scared lest the film become too vivid a competitor to mediocre teachers.⁵

The sound film has not become a competitor of mediocre teachers; it has become a most valuable supplement to excellent teaching.

The Silent Film. The production of silent films for commercialized recreation ended when it became possible to record and transmit sound, correlated with the visual projection. Silent films for educational purposes have limited use, as may be inferred from the previous discussion. The fact that a verbal concept is presented in close proximity

⁵ Glenn Frank, "I See a Plant Grow," *Teaching with Motion Pictures*, Davenport, Ia., Victor Animatograph Corporation, p. 4.

with the action is one of the major reasons why the sound film is especially useful for educational purposes. Some teachers, however, prefer to make their own explanations. In this case, the sound record may not be operated.

One aspect of silent films should not be overlooked. The recording of sound to be correlated perfectly with the projection of pictures is a major obstacle to teacher or students in making their own sound films. It is, however, relatively inexpensive for the school to secure a movie camera, film, and projection equipment. Movies which show how a teacher carries out administration of a group test, how students proceed in setting up an experiment in chemistry, how students decorate a homeroom, or how students conduct themselves during a fire drill—these are but a few of the daily occurrences which may be captured on films and shown to new teachers, new students, parents, or other community groups. Movies of college football games are one of the best instructional aids for improving teamwork and for method classes in college; also they are used frequently to promote community interest and to provide recreation.

Many high school students possess movie cameras, take excellent pictures, and are capable of providing the verbal accompaniment to bring important and interesting parts of their life experiences to the class. Generally, students are highly interested in their own activities and those of their friends. Student or teacher-made movies are often much more worth while than those commercially produced for building motivation, encouraging creativity, and establishing good school-community relations.

GUIDES FOR USING FILMS

The previous discussion has outlined the principal values which may be obtained from the use of films. To use a film to best advantage, certain precautions should be taken in selecting it, getting the projection room and equipment ready, getting the class ready, and following the film presentation with appropriate discussion, testing, or further study.

Selecting Films. The best procedure for selecting films within a school is to organize a committee of teachers for that purpose. They

examine a recent edition of an educational film catalogue, the list of films owned by the school, and the list of rental films from a central school office, a state or community agency. Film titles are selected for preview. When previewing the film, they consider these questions:

1. What specific instructional purposes does this film serve?
2. How and where does this film fit into my unit or course plans?
3. Is this film suited to the mental, social, and emotional maturity of my students?
4. Does the film present its message clearly and accurately?
5. Is the setting of the film sufficiently realistic to capture and hold the interest of my class?
6. Will use of the film make the learning more effective?

The main reasons for groups of teachers or groups of students in college classes to preview films are to make better judgments in selection and to allocate films in various classes for use. Generally, information presented in films sweeps across subject lines with apparent purposeful intent. Thus, the films *How to Read a Book* and *Act Your Age* may be used advantageously in any high school classroom during the first week of school. Students should not be required, however, to see the same film in three or four classes during a given day, week, or month.

Getting Ready for Film Use. Securing a suitable projection room for showing films is a major obstacle in many of our smaller or older school buildings. Windows may be screened adequately at relatively low cost. Improving acoustics is a more difficult task. Where a room cannot be prepared for adequate reception of sound, teachers must learn to exchange classrooms.

In most high schools the teacher is responsible for having the room and equipment in readiness for showing the film. In larger schools, boys and girls who are interested in becoming professional projectionists often organize into clubs. In some schools this interest is capitalized upon, and classes in graphic arts are organized and taught by a teacher who is responsible for care and maintenance of all projection equipment and graphic materials. When this situation exists, the students are on call during their free periods to project films and to handle other

visual aids as the teacher desires. In some classes the classroom teacher locates students who are interested in operating projection equipment and they become responsible for projection. Every teacher should be able to operate a projector and to teach students how to do it.

Before showing a film, the teacher should prepare the students to see it. During the preview, the teacher notes the main features of the film, any terminology which may be difficult for the students, and questions or problems posed which are directly related to the present classroom activity. In class discussion the reason for seeing the film becomes apparent to the students, and a list of guide questions or features to note is discussed, placed on the board, or presented in mimeographed form. This sort of introduction is extremely worth while to the students. To show a film such as *Human Reproduction* or *Dating Do's and Don'ts* without student preparation is to badly abuse the film. In some schools general procedure is to show an educational film to the whole school in the assembly without giving teachers or students any opportunity to prepare for its efficient use. Obviously, entertainment films may be used advantageously in this manner without preparation, but the probability for misuse of educational films is very great.

Following the Film. If a film has served an educational purpose, it should lead to a discussion or further study of a related problem or topic. Follow-up is conducted according to the nature of the film. A film which explains how to read a book may be followed in this manner: First, discuss the major points presented and any questions from the students. Second, give specific assignments, according to film recommendations, for (a) using a basic text, (b) using a reference book, (c) selecting a book from the library, or (d) all of these if they are used by the class. Third, note how the students carry out these assignments. Discuss any problems which are encountered. Fourth, show the film again to help them evaluate their procedures. One week at the beginning of a semester may be used to advantage in this manner.

One warning is in order. Do not frustrate students with such elaborate follow-up procedures, especially graded tests or question-and-answer recitation, that the motivational value of future films is lost.

OTHER VISUAL AIDS

Film strips, slides, unprojected pictures, and graphic materials are the more important visual aids other than films. They have specific values which are now treated briefly.

Film Strips and Glass Slides. The cost of film slides or film rolls is relatively low, so the film strip may be secured when funds are not sufficient to procure moving pictures and the expensive projection equipment. Film strips, consisting of a series of still motion pictures, capture the characteristics of a situation or definite steps in a process. In science classes, particularly, steps of an experiment, stages in life processes, or pictures of plant and animal life to be considered in detail are contained in film strips. A major value of this type of visual presentation over the moving picture is that closer and sustained attention may be given to details. The film strip or film roll may be held in projection as long as desired; the strip may be stopped at any point to allow for questions or discussion, and a picture may be reviewed as often as desired.

In social studies classes the major features of an industrial plant may be partially identified before the group goes on a field trip. In art classes, designs in leather or metal may be viewed. In auto mechanics, the operating parts of a carburetor may be examined prior to breakdown. These are a few of the uses of film strips.

Glass slides serve similar purposes to slide films. A song may be projected in a music class. Phrases and sentences may be projected for a shorter and shorter time to help build reading speed. A business letter may be projected so that form is clarified. Chief disadvantages of glass slides include difficulty of construction, considerable space required for storage, and susceptibility to breakage. In general, the procedures appropriate for selecting and using moving pictures apply to film strips and glass slides.

GRAPHIC MATERIALS

The teacher displays cartoons and posters to direct the attention of a class to a topic, problem, or current event. Artistic arrangement and

use of color tend to attract attention. Usually only the most obvious information is gathered by students in viewing this type of material. Graphs, charts, maps, and the like may be displayed to help students understand details. A worth-while instructional procedure is to set up methods for the students to secure materials appropriate to their study and to display them. Problems related to graphic materials are now investigated.

Cartoons, Posters, and Pictures. This type of aid is relatively inexpensive and may be secured or produced by students in the class or by the teacher. Comics carry high appeal for adolescents, as do caricature and painting. One teacher may produce a series of cartoons to illustrate the struggle between labor and management; another may produce a series of posters to illustrate different vocations; a third may display paintings which illustrate man's progress in controlling energy.

Often students make visual aids—posters to advertise school affairs, cartoons to illustrate kinds of conduct, and caricatures of important men of history, literature, or science. Making these aids serves to build interest in securing needed facts for an authentic presentation, to develop creative ability, to correlate work in many classes with the art program, and to provide a variety of activity which is constructive in nature.

A prospective teacher who begins to accumulate these aids in his college program, continues doing so in his early teaching, develops some artistic skill in construction and presentation methods, and sets up procedures for students to assist in the process finds that the most dark and drab classroom may become alive with color and forceful ideas at low cost to the school system.

Graphs and Maps. The bar graph, line graph, and circle graph are useful to summarize detailed information. Such information may then be placed on a slide for projection or the original may be displayed in appropriate size and color.

A bar graph is easy to construct and is especially useful for showing facts such as school population for each decade since 1890, number of auto accidents in the community during each of the last ten years, cost of a given item of clothing during each of the last ten years, and

the like. In any class where information is gathered which may be presented in a series of ratios, the bar graph is an effective method for visual presentation of the summarized data.

A circle graph is used to best advantage to show the relationship of the parts to a whole and the relationship among the various parts. Each student in class may compute how he spends his money during a given month. Expenditures for various items—food, clothing, movies, ball games, transportation—are added and then figured as percentage of the total amount. A circle is made to represent the total expenditures or 100 percent. The item expenses are then entered as fractional parts of the total circle with clear-cut dividing lines or colors. The total expenditure of the class and the total expenditures for various items may be computed and a circle graph constructed. In this way a student may very quickly compare his expenditures with the class average.

Line graphs are used to show variability of one or more factors. Thus, students record precipitation and barometric pressure during a week. Days of the week, divided into six-hour periods, are entered on the bottom of the graph. A scale for amount of precipitation is recorded in the left margin and a scale for barometric pressure is recorded in the right margin. For each day the amount of pressure and rainfall are recorded at each six-hour interval. A simpler line graph consists of entering barometric pressure only and at hourly intervals.

Much information is presented graphically in newspapers, magazines, textbooks, and reference books. Students need to learn to interpret graphs. The better way to teach this skill is to have them secure information, summarize it, and present it in graph form. A major problem in teaching graph construction is to decide where to draw the line between accuracy and student boredom. Student-made graphs should be reliable; exact and precise mathematical computation may be forsaken in some classroom situations to prevent student boredom in the activity. Often high school students need much individual assistance in constructing a simple circle or bar graph.

Maps. One has only to spend a day in a modern secondary school to note the variety of subject-matter information presented in maps. Political maps, political-physical maps, and maps of current events, rainfall, temperature, soil, population, and products, to name some of

the more important, are found displayed in classrooms and hallways. The projections may be in the form of a globe, a relief map, or a flat map.

Map makers of modern times have greatly improved coloring and use of symbols. They have developed projection techniques which give excellent graphic representation of size, location, distance, and direction. The form, projection type, color, and use of symbols are selected to accommodate the kind of information the map is intended to convey.

As indicated, maps have been developed for specific purposes. For example, in the flat, current events map the major emphasis is on the broad sweep of current events in the various political regions of the world. A relatively cheap paper is used. The projection itself tends to distort both distance and size slightly. The map does not intend to be perfect in minute details of distance and size. The modern air map with the North Pole at its center shows distance and size in the Northern Hemisphere in proper perspective but distorts the same features somewhat for land masses of the Southern Hemisphere. Thus, in selecting maps for classroom use, the teacher should be aware of the map maker's intentions.

Maps, like other visual aids, are used to good advantage in particular situations as the teacher understands their make-up and use and as students understand the purpose of the map study, learn how to use a map including the symbols, and have the map available for study when it is needed.

The Display Area. Here is a partial list of visual aids which may be displayed on a bulletin board or on a flat display area:

| | |
|---------|---------------|
| Cartoon | Painting |
| Chart | Photograph |
| Diagram | Picture |
| Drawing | Postage stamp |
| Graph | Postcard |
| Map | Print |

These may be secured from various sources, some of which are listed in the bibliography at the end of the chapter. Students may secure many of them and make others.

Here is a partial list of visual aids which may be placed in a display area:

| | |
|---------------------|---|
| Apparatus | Diorama |
| Aquarium | Model |
| Biological specimen | Museum |
| Carving | Various types of student-made and commercial products |

Unfortunately, many of our classrooms are so crowded with desks and pupils that there is insufficient space for a display area. In fact, the walls of some rooms are so completely taken up with blackboards and windows that there is not space for a three-by-six-foot bulletin board. A summary of the methods suggested by Kinney and Dresden⁶ to overcome some of these handicaps follows:

1. Cover the hard-surface wall with padded canvas painted the desired color.
2. Secure monk's cloth or Indian head to the wall by gluing the top-edge close to the ceiling and allow it to dry. Then stretch the material and fasten the bottom near the floor.
3. Cover a wall with beaver board or green label board.
4. A checkerboard arrangement of one-by-two-inch wood may be assembled and secured to a wall in any dimension or height desired.
5. Attach wire, twine, colored ribbon, or jute from the molding around the upper part of walls. Secure display materials to the twine.
6. Cellulose tape, labels, and circular reinforcements may be used to secure flat materials to a slate blackboard.
7. Painted blackboards may have pins stuck into them to secure flat materials.
8. Attach colored paper to the blackboard. Pin materials on the paper.
9. Nail fitted pieces of celotex or wallboard over the blackboard or hang it over the blackboard with screws or hinges.
10. Cover window or door areas when such may be done without interfering with light or student passage.

⁶ Lucien Kinney and Katharine Dresden (eds.), *Better Learning Through Current Materials*, Stanford, Stanford University Press, 1949, pp. 117-122.

11. Secure display cases for three-dimensional objects.
12. Carry the display area into the hallway adjacent to the classroom door.

After space is arranged, various methods for setting up the display, including use of color, artistic arrangement, lettering, and psychological timing of display, are important factors in effective use of visual aids to instruction.

AUDITORY AIDS

Thomas Edison predicted that the motion picture would eliminate the need for teachers. Current technicians predict the same for television. The latter prediction will prove untrue, as did Edison's. These two audio-visual aids call for better teaching rather than elimination of teachers. It is the teacher who must decide how, when, and for what purpose these aids may assist in carrying out the teaching process—a face-to-face relationship with learners.

The sound film was discussed with visual aids because sound-projection methods were adapted to the silent motion picture. Television is discussed with the radio, phonograph record, and transcriptions because the visual projection was adapted to radio.

RADIO AND TELEVISION

Many schools have radio sets to receive AM and FM programs from commercial broadcasting stations, college- or school-owned stations, or rented telephone wires. Increasingly radio programs are being transcribed for later production, and some commercial producers make transcriptions available for school use.

Radio transmits sound only; television conveys sound, sight, and motion simultaneously. As such, it has great potential as an instructional aid. Its popularity for recreation among the American people has already been demonstrated.

Uses of Radio. The teacher may direct student listening to radio programs in school and out of school. A chief objection to radio listening in school is that programs which suit the learning activity are frequently not broadcast at the time they are needed. Frequency modulation programs have added to the selection, however; and possibility

exists for locating radio programs which fit the activity. Also, some teachers who have identical students in different classes may shift an instructional hour to hear a particular program.

Student listening outside of class may be correlated with units of study in school. There is more possibility for effective use of radio in this manner than during school time because the programs which are broadcast after school hours are usually more educational than those during school time. The hours from 9:00 A.M. to 3:30 P.M. are usually filled with programs intended only for housewife listening. One example of use of radio outside of school follows another correlating out-of-school listening with a unit of work:

In a United States history class, students were studying political platforms and candidates during a national election campaign. Among the questions raised in discussion were: (1) What are the national platforms of each party? (2) Who are the candidates for President and Vice-President? (3) How does each candidate present his views in relation to the party platform? (4) Which party has the better platform? (5) For which candidate would you vote? The class secured information from newspapers which outlined the platforms. Radio schedules were investigated in class and listening times were established for each student. The information was brought to class and studied at appropriate intervals in connection with study and discussion of earlier political campaigns, platforms, and candidates. Students were assigned specific written work in connection with the radio listening which included outlining the speeches they had heard, evaluating the accuracy of information presented, and noting how frequently the candidates expressed a conviction contrary to the platforms. To help clarify the issue of whom to vote for, sociodramas were enacted with students playing the roles of candidates. Panels of four members, each representing a candidate of the same party, discussed the probable legislation which would be enacted if they were elected. Thus, there was effective preparation for the radio listening, adequate teacher provision to assure that it was carried out, close correlation with the present study, and effective follow-up of the listening.

In an agriculture class, students were studying livestock marketing along with carrying out various projects. During the hour a short radio

program was tuned in which carried reports of livestock prices. This program was listened to daily and line graphs were made by committees of students who were responsible for listing daily prices of cattle, hogs, sheep, and poultry. The work was correlated with study of preparing livestock for shipment, handling livestock in transit, supply and demand, the governmental price support program, and the effect of the international situation on livestock prices. Charts, prepared by the Department of Agriculture, were analyzed to discover peak shipment months with correspondingly low prices. The analysis helped students to discover whether the same pattern would probably hold in this and future years.

Another use of radio is demonstrated when students prepare script and produce a broadcast for a commercial station, school-operated station, or school public-address system. The students of Abraham Lincoln High School in San Jose, California, have been giving broadcasts over commercial stations for years, as have many other high school groups. Various kinds of programs are produced: musical with student performers, disk-jockey with student announcers, dramatic presentations with student performers, and reporting of school news. Definite time schedules are arranged for school programs during each week of the school year. The more important values gained by this procedure are as follows:

1. Participating students learn to write clearly and creatively.
2. Participants work to improve voice or other contributing skills.
3. Participants learn to listen more attentively to radio programs and class discussions.
4. Participants learn to express themselves orally.
5. Participants learn basic understandings about radio production.
6. Participants learn to meet definite time schedules.
7. The school radio program helps to create a feeling of affiliation or belonging among all the students of the school because it becomes "our" program.
8. The school radio program tends to unify many aspects of school life, including the instructional program.
9. The school radio program tends to build better school-community relations.

10. The school radio program tends to create student interest in radio broadcasts of an educational nature.

The same degree of teacher responsibility in selecting, guiding, and following up radio use in and out of the school is demanded as was indicated for use of sound films. Directing student broadcasting requires special understanding and skill in radio production techniques.

Records and Transcriptions. The uses for records and transcriptions will become apparent as we examine subject areas for which they are produced.

In social studies, a series of twenty-four recorded programs, entitled *Immigrants All; Americans All*, includes these titles: "Our English Heritage," "Our Hispanic Heritage," "Winning Freedom," "The Negro," "Social Progress," "A New England Town," and "An Industrial City." These records are dramatized by leading performers. For the same area, *Voices of Yesterday* presents the actual voices of twenty-four historic figures on magnetic tape. Included here are Florence Nightingale "Addressing Her Comrades," William Jennings Bryan "On Freedom for the Philippines," Admiral Robert E. Peary "On His Discovery of the North Pole," Theodore Roosevelt "In a Message to the American Boy," Will Rogers "On Politics," and Pope Pius XI "In a Christian Greeting."

In English, recordings of well-known novels, poems, and short stories with the voices of leading dramatists are available. The Shakespearean plays, dramatized by various casts including such well-known artists as Maurice Evans, Orson Welles, Jose Ferrer, and Fay Bainter, have been recorded. Archibald MacLeish may be heard reciting "America Was Promises."

In speech and language one may secure records of various dialects found among Americans and the British. Also, records are available for self-education to improve speech and to learn to speak various foreign languages.

The above are a few of the many records and transcriptions listed in a catalogue, *Selected Listing of Educational Recordings and Film Strips for More Effective Learning*, which may be obtained at the address given below.

Excerpts from a list of sources of audio-teaching materials⁷ indicate catalogues and guides which are usually kept in a college library:

Sources of Films, Film Strips, and Slides

Educational Film Guide. H. W. Wilson Co., 950 University Ave., New York. Cumulated annual catalogue with supplement service. \$4.00. Title index, subject classification, brief descriptions; evaluation comments frequently included.

Educators Guide to Free Films. Educators Progress Service, Randolph, Wis. \$5.00. Revised annually. Lists films and slide films. Title index, subject classification, cross index, and brief descriptions.

Filmstrip Guide. H. W. Wilson Co., 950 University Ave., New York. Cumulated annual catalogue with monthly supplement service. \$3.00. Comprehensive list of current releases, classified by subjects; alphabetical index.

Guide to the United States Government Motion Pictures. Compiled by the Motion Picture Division, Library of Congress, Washington 25, D.C. U.S. Government Printing Office, 1947. 40¢. Films of the government departments and agencies which are available to the public.

Sources of Educational Slides. Prepared by Division of Audio-Visual Instructional Service of the National Education Association of the United States, 1201 Sixteenth St., N.W., Washington, D.C., 1947. Free.

Radio Program Listings

Network program listings, in the form of monthly service schedules or periodic outlines of programs, may be obtained without charge from the following: American Broadcasting Company, 30 Rockefeller Plaza, New York 20, N.Y.; Columbia Broadcasting System, 485 Madison Ave., New York 22, N.Y. (also teacher's manuals for American School of the Air series); Mutual Broadcasting Company, 1440 Broadway, New York 18, N.Y.; National Broadcasting Company, RCA Building, Radio City, New York 19, N.Y. (also teacher's handbooks for University of the Air programs, 25¢ each).

⁷ Howard T. Batchelder (ed.), *Audio-Visual Materials in Teacher Education, 1950 Yearbook of the Association for Student Teaching*, Lock Haven, Penna., Association for Student Teaching, 1950, pp. 163-171.

Educational Recordings (Phonograph Records and Transcriptions)

Catalogue of Recordings. Federal Radio Education Committee, U.S. Office of Education, Washington, D.C. Lists records to buy or borrow.

1949 Listing of Educational Recordings for More Effective Learning. Educational Services, 1702 K St., N.W., Washington, D.C., 1949. Free. Catalogue of educational recordings in foreign languages, geography, social studies, English, music, speech, safety, friendship.

Saturday Review of Literature. 25 W. 45th St., New York. Fifty-two issues, \$6.00. Weekly review of recordings; monthly supplement section.

Free and Inexpensive Teaching Aids

Educators Index to Free Materials, Educators Progress Service, Randolph, Wis. Several payment plans possible; write for information. Comprehensive annotated listing organized under subject headings.

Index to Reproductions of American Paintings, by Isabel and Kate M. Monro. H. W. Wilson Co., 950 University Ave., New York, 1948. \$8.50. Artist's name, title, subject, and, if a painting, the sitter's name listed. Guide to pictures occurring in more than eight hundred books.

U.S. Office of Education, Division of Central and Auxiliary Services, Federal Security Agency, Washington 25, D.C. Composed of sections for (1) Visual Aids to Education, (2) Educational Uses of Radio, (3) Library Services, and (4) School and College Health Services.

This list represents the extent to which aids are being produced and made available for school use.

The Prospects for Television. It is too early to predict how television will finally affect education. Out-of-school assignments are being used widely in the areas where television is commonly found in most homes. Considerable newspaper and periodical literature has appeared which indicates that television keeps students from doing any homework and, in some cases, from getting enough sleep. The selection of programs for educational use is as yet meager, but it is possible that some television programs will be produced primarily for educational use.

An interesting account of the future of television is reported in the *NEA Journal*.⁸ On March 22, 1951, the Federal Communications Com-

⁸ Belmont Farley, "Vision and Television," *NEA Journal*, May, 1951, p. 357.

mission set aside specified channels in television for educational use. Chiefly responsible for securing this use was the Joint Committee on Educational Television, whose members represented NEA, American Council on Education, National Association of Educational Broadcasters, National Association of State Universities, National Association of Chief State School Officers, National Association for Education by Radio. Time was provided in the decision of the FCC for education institutions to do preparatory work to get authorizations for stations. The Joint Committee on Educational Research, 1785 Massachusetts Avenue, N.W., Washington, D.C., is maintaining a professional and clerical staff "to promote the installation of non-commercial stations. It will aid those who are producing and using television programs for educational purposes." The future of educational television is stated thus: "The FCC has reserved the space in the spectrum. The JCET stands ready to help schools and colleges use it. Television for education waits upon the vision of educators."

SUMMARY

Instructional materials should be used to make learning activities meaningful for the students. Developing effective methods for securing and using various instructional materials is an important competence of the professional teacher. In most classes, visual, auditory, and audio-visual aids to learning are used in combination with direct first-hand experiences and second-hand experiences gained through reading and listening.

Reading materials—a basic textbook, supplementary texts, reference books, periodicals, and newspapers—are the most widely used learning aids. The student workbook and the teacher's manual serve mainly to facilitate teacher and student use of a basic text and correlated supplementary materials. To profit from reading, one must understand words and other symbols singly and in combination. Visual aids in books and other visual aids used in the classroom help the learner to understand situations, concepts, and processes.

Motion pictures, film strips, slides, unprojected pictures, and graphic materials such as cartoons, posters, graphs, and maps are the principal types of visual aids. These may be used to bring a higher degree of

concreteness and reality to printed or verbal explanations. The motion picture has unique values for educational use, as does television, in that sight, motion, and sound are brought to the observer simultaneously.

The radio, records, and transcriptions are auditory aids to learning and may be employed in a variety of constructive ways. In using auditory and visual aids, the teacher's general tasks are (1) to select the material in terms of the purposes of the unit or course, (2) to select the material to meet the students' achievement, mental, social, and emotional maturity level, (3) to get the material in readiness for classroom use, (4) to prepare the students for efficient use of the material, (5) to use the material to best advantage, and (6) to make sure that use of the aid facilitates present and future learning. Students frequently secure and make many visual and auditory aids. This activity constitutes a significant correlate of educational aids in that students, under teacher supervision, are engaging in an adult form of self-education.

QUESTIONS AND ACTIVITIES

-
1. What changes or additions would you make in the five criteria proposed for deciding whether to use a textbook?
 2. Secure two or more textbooks on special methods in your major field. Which is best? Should more than one text be used in a special methods course?
 3. Secure a number of textbooks which might be used in a high school class. Which is the best? Should more than one be used?
 4. Outline a plan for using a textbook efficiently.
 5. Discuss the major values and limitations of using a single textbook as the basic instructional material.
 6. What are the chief values and limitations of using teacher's manuals? Student workbooks?
 7. Discuss how current materials may be used advantageously in the classes you take in college or teach in high school. List the periodicals which every teacher should read.
 8. Drawing from your high school experiences, describe the best procedures for using current materials.

9. Outline a procedure which a school might follow in selecting expensive or free materials produced by private groups and governmental agencies.
10. Arrange the visual aids discussed in order of (a) probable educational values, (b) cost, (c) ease in use, and (d) ease in producing in class.
11. What educational values may accrue from a well-executed display area? What are the chief difficulties in securing and maintaining a good display area or bulletin board?
12. Arrange the auditory aids discussed in order of (a) probable educational values, (b) cost, (c) ease of use, and (d) ease in producing in class.
13. Make a list of reading materials and visual and auditory aids for a unit which you have prepared or which might be used advantageously in connection with the study of this chapter.
14. Drawing from your own experiences and from current articles, how does television affect instruction in the high school and amount of time students spend in study at home?

REFERENCES

- Dale, Edgar, *Audio-Visual Methods in Teaching*, New York, The Dryden Press, 1946.
- Douglass, Harl R., and Mills, Hubert H., *Teaching in High School*, New York, The Ronald Press Company, 1948, chaps. 15, 16, 17.
- Educational Film Catalogue*, New York, H. W. Wilson Company, 1936—.
- Fowlkes, John Guy (ed.), *Educators Index of Free Materials*, Randolph, Wisconsin, Educators Progress Service, annual.
- Free Films Source Directory*, DeVry Corporation, 1111 West Armitage Avenue, New York.
- Hoban, Charles F., *Focus on Learning*, Washington, American Council on Education, 1942.
- Horkheimer, M. F., and Diffor, J. W. (eds.), *Educators Guide to Free Films*, Randolph, Wisconsin, Educators Progress Service, annual.
- Kinney, Lucien B., and Dresden, Katharine (eds.), *Better Learning Through Current Materials*, Stanford, Stanford University Press, 1949.

- McBurney, James H., and Hance, Kenneth A., *The Principles and Methods of Discussion*, New York, Harper & Brothers, 1939.
- McKown, Harry C., and Roberts, Alvin B., *Audio-Visual Aids to Instruction*, New York, McGraw-Hill Book Company, 2nd ed., 1949.
- Modley, Rudolf, *How to Use Pictorial Statistics*, New York, Harper & Brothers, 1937.
- National Society for the Study of Education, *Audio-Visual Materials of Instruction, Forty-Eighth Yearbook*, Chicago, University of Chicago Press, 1949, Part I.
- Sands, Lester B., *An Introduction to Teaching in Secondary Schools*, New York, Harper & Brothers, 1949, chaps. 12, 13.
- Wittich, Walter A., and Fowlkes, John G., *Audio-Visual Paths to Learning*, New York, Harper & Brothers, 1946.

CHAPTER 11

Building Effective Study and Work Methods

The number of college freshmen who possess inadequate study methods is so large that frequently our colleges organize a class or a unit within a class to assist freshmen in building more efficient study techniques. Why does a college set up a special class or unit in effective study for all freshmen? Because beginning college students need special help in using the library to good advantage, in setting up independent study schedules, and in developing work methods appropriate for successful completion of their various classes. Generally, high school teachers need to help students with these same problems in most classes they teach. It is important for high school students to learn effective study and work methods—more so, perhaps for those who do not go to college than for those who do.

To identify factors which affect study methods, to outline methods for helping students develop adequate study and work methods, and to investigate special considerations for slow and fast learners are the chief tasks of this chapter.

APPRAISAL OF FACTORS WHICH AFFECT STUDY METHODS

We evaluate a student's work or study methods by noting particularly (1) how quickly he gets started to work, (2) how well he uses time and materials, (3) how consistently he concentrates on the work at hand, (4) how well he completes the work, and (5) how well he appraises the adequacy of his performance and conduct. The

student who performs these tasks efficiently has developed excellent study and work methods.

Often boys and girls learn study methods on a trial-and-error basis with little assistance and direction from teachers. Teachers should, however, help them learn to study so that fewer errors occur—failures, dropouts, erratic use of time, destruction of materials, and other wastage of resources.

The two most important groups of factors which affect study methods in a given situation at a given time are the learner's readiness for study and the situational characteristics which affect study.

THE LEARNER'S READINESS FOR STUDY

Have you ever tried to concentrate on reading a detailed report, such as directions for completing an income tax return, when you felt ill? Have you ever tried to take a long examination or to write a theme when your best friend was lying seriously ill in the hospital? Have you ever taken a fourth-year college class in chemistry without having had the necessary previous classes? Have you ever tried to knit a sweater or to write a poem when you felt sure that you did not have the necessary physical or mental aptitudes? Physical, social, emotional, and mental characteristics of an individual, along with his previous achievement and already developed work habits, are important factors in determining how efficiently a task is begun and carried to completion. In the following discussion, these factors are analyzed briefly. Major emphasis is directed to identifying their existence.

Physical Condition. It appears trite to say that a student who is feeling ill, who has a physical defect which is uncorrected or unaccommodated, who is malnourished, or who does not get sufficient rest is incapable of effective work at the time the condition exists. Any one of these factors may keep a student from carrying out classroom work.

Various methods may be employed to identify the unhealthy or handicapped child. Medical examinations should discover visual and auditory defects, other structural defects, and the presence of any physiological malfunctioning which interferes with good health. The school nurse should send to each teacher notations of any physical characteristic which requires special attention on the part of the teacher.

Where medical examination results are not available and where no nurse performs services such as those mentioned, the teacher may do these things: note left-handedness and provide for it, note physical size and seat students accordingly, note students who hold printed materials close to or far away from their eyes to detect near-sightedness and far-sightedness and seat accordingly, note students who cup hands to ear or who have difficulty in following a class discussion to identify the hard of hearing and seat accordingly, note evidences of sleepiness or lack of interest in school work to identify probable poor health habits.

The teacher is the first line of defense for locating defects, for helping children to overcome physical handicaps, for encouraging good health habits, and for preventing the spread of communicable diseases. Many adolescents may be helped to study more efficiently when developmental idiosyncrasies, minor defects, and less serious physiological malfunctioning are identified and accommodated in the classroom. More serious cases need to be referred to the parents or physician.

Social Factors. Does the student have one or two good friends in the class, or is he a lonely isolate? Adolescents, whether they appear so or not in a classroom, are interested in how others react to them. If they are to become well-adjusted adults, they must learn to make and to keep friends. The student who has no friends in class and does not get along well with the teacher will not study effectively.

A sociometric test is the best single instrument for discovering the social relationships which exist within a classroom group when students have had opportunity to become acquainted with one another. It may be used to identify the isolates, the cliques, and the popular students. When sociometric tests are properly interpreted, inferences may be drawn concerning each student's social adjustment.

Appraisal of social adjustment may be made through observing students in discussion, in committee work, in presenting individual and group reports, and in verbal responses to the teacher. Students showing the following characteristics should be identified: the shy, the unpopular, the argumentative, the self-centered, the aggressive, and the clique-centered. Although characteristics like these exist on a continuum and we cannot, therefore, categorize all students in such groupings, those exhibiting an extreme degree should be identified.

Frequently they do not concentrate well in individual work nor are they able to carry out work involving group action. Depending upon what behaviors they exhibit in their social relations, appropriate teacher methods must be used to help them overcome the deficiencies.

Emotional Factors. Emotional and social adjustment are closely related. Emotions originate and are expressed, for the most part, in an individual's interaction with other human beings. Expression of anger, jealousy, fear, and affection is not readily identified among adolescents because they have already learned to hide their true feelings.

Continuous worry or anxiety about physical change and development, about friends, about school work, about religion, or about home conditions is not easily recognized. Anxiety which persists over relatively long periods of time is highly destructive to concentrated effort on any task.

Standardized tests, inventories, and check lists may be useful to identify certain emotional tendencies. Tests results, however, are not so useful as close teacher observation of the adolescents' emotional expressions in the classroom. It is the method of expression, its intensity, and its duration which most hinder an adolescent's work. The teacher who analyzes the classroom situation in which the emotion originates is able to help the student more directly than can be done simply by knowing a tendency exists.

Previous Achievement. Graded materials for classroom use become increasingly difficult and build progressively upon already developed understandings and skills. The vocabulary used in a series of social studies or mathematics texts increases in difficulty at each grade level. So do classroom activities in typing, shorthand, music, physical education, and other skills. In high school, students' work methods in any situation depend upon the extent to which the previous achievement is available for present use and upon the degree to which the teacher sets work requirements in harmony with the present achievement level.

Standardized tests are useful to determine level of achievement in subject fields but are not absolutely essential. Teachers should, however, write tests or use other observation methods to ascertain whether students possess the achievement needed to make progress with the present work. Thus, words, phrases, or sentences from a textbook may be or-

ganized into a test to discover how well students have mastered the vocabulary needed to get meaning from the book. In all mathematics classes, teachers should understand the nature of the processes and test construction sufficiently well to find out where each student's achievement places him with respect to beginning his study of the process. In any class activity we need, first, to become concerned about where students are; second, to develop appraisal techniques to find where they are; and third, to set up teaching procedures to get them off to a good start from where they are. Unless these three conditions are operative, students are unable to develop effective study habits.

Established Study Habits. High school students since early childhood have been learning attitudes toward work and methods for carrying out work activities. Some of these are good; others are not. One student upon meeting a new word adds it to a list, discusses it with the teacher or parents, or gets its meaning from the dictionary. Another student skips over the new words, quickly loses interest in the reading because he does not understand, and quits reading. One child has learned to do certain chores at home—to keep his room tidy, to get up for school on time, to take care of his clothing, and to keep the lawn mowed. He does these things promptly, reliably, and considers he has failed unless they are completed on schedule. Another has escaped these responsibilities through indulgent parents who do everything for him or through inconsistent parents whose lives are so hectic that they cannot get any semblance of order in the home for themselves or their children.

In a good learning situation the student's established work habits may be appraised by noting carefully (1) how long he takes to get started, (2) how he cares for materials, (3) how he uses the materials, (4) how well he concentrates, (5) how frequently he requests assistance, (6) how he reacts when not completing his work, and (7) how he reacts to teacher suggestions.

Recently developed standardized tests of work skills and study methods are beginning to appear in quantity. They are very useful for appraisal of students' study and work skills.

Intellectual Capacity. The student with high verbal and abstract abilities may not start to work as quickly or concentrate as persistently

as does one with average or low intellectual capacity. However, he can probably be taught to attack verbal and abstract problems with less help than the average or slow student requires.

Identifying students with varying degrees of intellectual capacity may be accomplished by administering IQ tests, by examining records of school marks, by noting ages of the students in the class, and by observing the quality of work performed. In general, the brightest students are the youngest, are able to memorize rapidly, have wide vocabularies, read rapidly, manipulate abstract problem-solving concepts readily, have good school records, and make many original contributions to classroom discussions. Qualities like these exist on a continuum. No sharp differentiations are found between bright, average, and slow students. One should, however, be especially alert to discover those students in each class who have great potentiality and also those who are very low in verbal abilities. Both groups need special help in organizing efficient study methods.

There are capacities other than intellectual which are seemingly present early in life. Chief of these are special physical, musical, and artistic potentialities, which will be treated more fully in the next chapter. The presence of intellectual and other capacities affects work and study methods. Usually, the higher aptitudes lead to better work methods when capitalized upon efficiently.

SITUATIONAL CHARACTERISTICS WHICH AFFECT STUDY METHODS

On a given day, identical students are observed in different situations. In one classroom they get to work quickly and use the whole period for work activities; in another they dawdle at the beginning, sit at their desks and draw pictures, daydream, or distract the attention of classmates, and leave most assignments uncompleted. Also, the boy who is observed to do nothing well in any class is a reliable messenger for Western Union. What are the characteristics of a situation which encourage efficient work methods?

The Physical Arrangements. Lighting, ventilation, adequacy of seats, cleanliness, color, and decorations all affect work methods. The implications are too obvious for lengthy discussion here. It is true, however, that teachers often become accustomed to the same furniture,

decorations, seats, and lighting facilities. They are comfortable in the classroom because it is familiar and homelike to them; they move about in it freely. They fail to recognize that what is comfortable and familiar to them may be most uncondusive to study.

Having materials in readiness for use as needed is another important characteristic which affects study. Too often when a needed material is not available the tendency is to assign some other work which is not planned carefully and which is uninteresting to the students.

In considering the kind of physical setting in which a student may study best you would probably include these features: (1) a quiet room free from distracting noises, (2) a well-lighted room, (3) a room pleasantly decorated, (4) a fairly large desk and a comfortable straight chair, and (5) needed materials available for concentrated work. If you agree that these are desirable features, then list what should be done to the "study halls" in your school and to your own classroom.

Interest. An individual does not attack a task energetically unless he is interested. He does not continue to work in a situation unless he feels he is making progress. Interest builds on success and dies with failure. Some classroom situations are interesting to students and others are not.

To build students' interest in a given work activity one may (1) help them to see the value of the work as it relates to a phase of their immediate living or to their vocational plans, (2) help them to see the significance of the work as it affects their present success and happiness in school, (3) start with relatively easy materials or assignments, (4) use the most interest-challenging materials and activities, in an attractive setting, calling upon all one's personal resources, and (5) organize student procedures for measuring progress. Unless the situation can be managed to arouse and maintain interest, students will not study well or work consistently.

Understanding the Work. It is not always necessary to tell students exactly what to do, how, when, and why to do it; but they must understand a student-teacher-originated problem, a teacher-made assignment, or use of a material sufficiently well (1) to know what the task is, (2) to understand preliminary methods of attack, and (3) to visualize the anticipated outcome. It is the teacher's responsibility to make

sure that these characteristics of a learning activity are understood by all students. When they are not, much confusion and little learning occurs. Teacher assistance and positive directions vary according to the difficulty of the task and the students' readiness to engage in it.

The Teacher's Methods. Students learn to study and to work effectively as the teacher guides such learning. The teacher who is unconcerned about how students study or who is impatient with their inadequacies is not likely to teach them such skills as (1) starting a task quickly, (2) developing sustained concentration, (3) keeping materials in order, (4) using time advantageously in and out of school, (5) setting up a good situation in the home for study, (6) studying independently, (7) using time well in group work, (8) locating sources of information and materials, (9) organizing information and materials, (10) carrying tasks to completion, (11) analyzing weaknesses in study methods, and (12) evaluating the adequacy of conduct and performance. These skills, like others, build gradually and continuously. It is each teacher's responsibility to help students develop the study skills needed to profit most from taking the class. Teaching students methods of study is as important as teaching subject information and facts.

Study methods should be taught in a functional setting. It is much easier to teach adolescents study methods for algebra or English in each class than it is to set up a special class or unit to teach more generalized study methods.

STUDY METHODS IN READING

Reading is an important activity in many secondary classes. It is a most important means for securing information. Reading involves many skills rather than a separate one. For these reasons, study methods in reading are now examined. Discussion of many important study skills was sacrificed in order to establish principles which underlie the development of five basic study skills: surveying a task to secure an overview, getting started to work quickly, getting meaning from the work, concentrating on the work until it is finished, and organizing the whole process sufficiently well so that it is remembered permanently.

The discussion assumes that the students have developed sufficient

skill to read printed materials with a reasonable degree of understanding. It is frankly recognized that a student with sixth-grade reading ability cannot use a textbook, reference source, or any reading material which has been written for students with tenth-grade abilities.

UNDERSTANDING THE TEXTBOOK

Wherever one textbook is used as a basic instructional material, the students should be taught what it contains, what purposes it serves in the class, and how to use it to best advantage.

Previewing the Text. Students are helped to use a text through a guided preview of it, starting, perhaps, with the Table of Contents to ascertain how the book is organized into units and chapters. The teacher's main job is to ask questions rather than to tell and explain. Thus, the textbook preview commences with "Where do we look to find out what is in our text?" Several answers may be anticipated.

As soon as the Table of Contents is suggested, the students are directed to look at it to answer the question, "What are the main topics or units?" These may be discussed to arouse interest in the text. One way to arouse interest is to ask the students to change the unit headings into questions and to answer the questions by reading the chapter headings. This procedure brings forth the chapters in a unit organization. At this point it is appropriate to indicate to the students how each chapter presentation contributes to the unit or topic organization, a concept with which the students will probably need assistance.

After the Table of Contents has been investigated, the Preface or the introductory chapter may be analyzed. Depending upon the length of the Preface or introductory chapter, an assignment may be given to read it silently to find out what the author regards as important in the book and why he wrote it. The silent reading should be followed with a discussion. A set of guide questions may be placed on the blackboard for longer prefaces or introductory paragraphs. Questions such as these are appropriate: (1) Why was the book written? (2) For whose reading is the book intended? (3) What are the most important points discussed by the author? (4) How does the author discuss a topic or problem? After investigation of the Preface, note should be taken of the date of publication and the publisher.

By this time students should begin to visualize what the book is for and how it is organized. A list of subtopics is now placed on the board or handed to the students in printed form. "Where can we find information on these topics?" "Where can we locate information about these men?" These questions direct the students' attention to the Index. The arrangement of the Subject Index is treated briefly, and for a few minutes the students find the page numbers of assigned topics. Students may work together in pairs to find specific discussions on appropriate pages taken from the Index. After it is certain that they know how to locate page numbers accurately, each student may be assigned to outline the main points presented about a topic or person. The selection of topics and names may be arranged to lead to an analysis of graphs, charts, maps, and other visual aids. In most cases it is probably better to examine these in connection with the chapter survey when specific purpose for getting the information has been established.

Depending on how well the preview moves and upon the number of visual aids, a quick survey of these aids may be made at any point to make the preview more attractive. This may be undertaken in the chapter survey.

Surveying a Chapter. Usually the introductory paragraphs, the summary, or both indicate the most important points discussed in a chapter. Often the introductory paragraphs outline the major problems raised and the summary presents conclusions related to them. The introduction and summary may provide continuity among chapters. Most textbooks give visual cues for identifying the major points of a chapter in the form of boldface print, italics, marginal notes, and numerically or alphabetically listed items.

The survey of a chapter, using the guides listed above, should be integrally related with the work in progress. Thus, after showing a film on soil erosion and discussing it, the teacher says, "We have seen some of the effects of soil erosion and have expressed our ideas about the problem. Your text discusses the same problem. In which chapter can we find facts about soil erosion?" After the chapter is located according to title and page, the next phase follows: "We discussed some of the main causes and effects of erosion. Does your text discuss the same? How may we find out quickly?" If the students are unsure and depend-

ing on the chapter make-up, assignments may be given to read the introductory paragraphs, to note the visual cues, or to read the summary. As with the Preface and introductory chapter, the assignment may be silent reading guided by a single question, "What are the main points discussed in this chapter?" It may be guided by more detailed questions. Short introductory paragraphs may be read orally by a student or by the teacher. The cues may be placed on the board in the same outline pattern as that used in the chapter.

Where charts, graphs, diagrams, maps, or pictorial illustrations are included in the chapter, specific questions which may be answered by correct interpretation of the graphic materials should be asked. A useful method for conducting this phase of the chapter survey is to direct one question to the whole class, divided into groups of three or four. Thus: "The graph on page — shows the value of crops lost each year because of floods. The figures in the left-hand margin are the years. The figures at the bottom show the value. Answer these questions from the graph: (1) In which year were losses heaviest? (2) In which year were losses least? (3) What year appears to be average? (4) What main conclusions do you draw from the graph about the destructiveness of floods?" The first three questions, directed to different groups after they have considered the material, should produce uniform answers. Answers to the last question will indicate the extent to which the students grasp the significance of the data and the extent to which further assistance in graph interpretation is needed. As new graphic materials are introduced in chapters, appropriate methods to insure accurate interpretation should be organized.

GETTING MEANING FROM READING

Understanding what one reads is the best assurance that it will be remembered. Poorly understood materials must be memorized to be reproduced and are forgotten quickly. Students vary widely in ability to comprehend; most students, however, may be taught to improve reading comprehension. Some techniques for comprehension practice will be directed mostly by the teacher. Others may be formulated so that the students learn to help themselves. Practice to increase reading comprehension should be incorporated at appropriate intervals in the

general course of class activities rather than set up as drill unrelated to the study.

Practice for comprehension must be suited to the reading materials. The purpose of nonfiction material of the kind usually presented in textbooks is to express a number of basic concepts, generalizations, or processes. The major tasks in getting meaning from such materials are to identify the major concepts, to complete a reading in a sufficiently short time to grasp the relationships needed to arrive at or to understand the generalization, and to organize the presentation into a meaningful pattern which is remembered. Practices suitable for this type of nonfiction material are analyzed.

Practice for Paragraph Meaning. The paragraph is a basic structure for conveying unified ideas. Paragraphs may be written which define, illustrate, present details, show comparison and contrast, or show cause and effect. The latter two types are most useful as beginning practice material. The practice may be carried out in this manner: Select paragraphs which are quite complete in themselves. Present these to the students in mimeographed form or refer the students to the book selections. Introduce the practice with a question related to the study under way. Tell the students to read the paragraph and to write down the answer after completing the reading. To provide variety in this practice have the students write a telegram to convey the meaning of the paragraph; present multiple-choice items from which the student chooses the correct interpretation; or conduct a brief class discussion of each paragraph. In any case, the practice is designed to help the student grasp the central idea presented in the paragraph.

Practice for Unit Meaning. Paragraphs build upon one another to present a more complete analysis of a topic. Usually, a group of paragraphs must be read to understand a topic. To build unit meaning, select short topics which are relatively complete in themselves and which may be read in five to ten minutes. Set up a series of questions which when answered lead to understanding of the major concept, generalization, process, or event. Present these questions after the reading is completed. The questions may take the form outlined for paragraph meaning. For diagnostic purposes, each individual's answers must be checked. Sociodrama, panel discussion, and general class discussion

also may be used as devices for helping the students evaluate whether they got the meaning intended from their reading.

When we attempt to set up whole-class practice of this nature, the problem of differences in reading rate immediately arises. Some students read twice as fast as others. One quite inadequate method for dealing with this difference is to have students stop reading at a given time. Each student marks the place where he has stopped reading and answers the questions that far. This procedure has a tendency to cause the slower reader to become excited or to "skim over" the material. It will not work if students are graded in the subject for that day on the number of responses correct or the percentage of responses correct. To increase reading speed, whole-class practice is practically impossible because of already present differential reading rates. Students increase reading rate incidentally through practice on comprehension because, as they understand more completely what is read, they stay with the reading and complete it in less time.

Separate practices should be arranged to improve focusing of the eye across the page, transferring from the end of one line to begin the following line, and using punctuation cues for grouping words—three important factors in reading rate.

Practice for Vocabulary. Vocabulary practice may be organized before or after the reading assignment, depending upon how many new words are introduced and how well they may be understood in context. If a discussion of new terminology preceded the reading assignment, the vocabulary practice should come after the reading is finished. If the material to be read has key words in it, not well explained, such words should be examined prior to reading.

Vocabulary practice preceding the reading may follow this pattern: "Here is a list of words which appear in the reading assignment. Underline each word which is new to you. Get the dictionary meaning of these words before you commence reading." If the list is long or if dictionaries are not available for each student, the class may be divided into committees to discuss the words, or a general class discussion may be conducted.

Each student may underline or write down each word he does not understand as he reads. In this case, the words may be noted in the dic-

tionary immediately, after the reading, or may be examined by the whole class after reading. Keeping lists of new words and recording the number of new words learned each week on a chart encourages students to continue the process independently.

Practice for Concentration. In the previous illustrations the teacher prepared the students for the practice with a brief discussion and a specific question or statement. This preparation is necessary to arouse interest and to establish purpose for the work. Reading with concentration becomes easier as it is related to a specific purpose. A question to be answered through reading serves to arouse interest, to get the reading started immediately, and to keep the reader at work until the question is answered.

Specific practice for building concentration may be arranged. It should be closely connected with class activities. As with practice for meaning, choose selections which are relatively short but complete in themselves. Discuss with the students the need for reading to answer a specific question or questions. As soon as the question is formulated, the students should start to read. For maximum concentration thereafter, all distracting and interrupting influences must be avoided. The students should not walk about in the room, talk with one another, sharpen pencils, or secure paper and other materials. The teacher should have taken care of all discussion or explanation of the material prior to the students' commencing their reading. Asking a question, discussing a point included in the reading, or calling attention to a student's conduct interrupts concentration of the whole group.

Students may be asked to secure from the library or from periodicals in the home short articles related to the problem under investigation. Each student brings the article to class with his list of the most important points related to the problem. In class the teacher suggests that students exchange articles, read the articles, and write a list of important points. Students then compare their summary lists. Bringing into the classroom materials of this type allied to a problem or any course activity serves to build interest in reading. As students get more information about a problem, interest for further reading builds, as does length of concentrated effort on the reading.

When the classroom activity and the reading in connection with it

are related to the students' more immediate and personal interests, such as getting into a club, getting a job, getting along better with classmates, insuring success in school, improving relations with the teacher, feeling more satisfied with a given performance, or feeling the thrill of making an important discovery, concentration in reading increases. Encouraging students to save time with concentrated effort so that they have more time for social and recreational activities and work experience promotes concentrated effort.

As with practice materials of any kind, materials used in practice for concentration should be neither too short nor too long, too easy nor too difficult. To concentrate, students must feel that they are making progress. Long, difficult materials which cannot be read with sustained attention definitely impede concentration.

Practice for Critical Evaluation. Up to this point, major emphasis has been placed upon practice intended to help the reader get ideas and meaning from a particular book or source. Another important reading competence is to check ideas and meanings gained from one source with one's own present understandings and with other sources of information. Materials from this book are used to illustrate practice in this area.

In Chapter 7 a unit in English in the tenth grade was outlined to illustrate how to make a successful start at the beginning of a school term. You recall that, after securing the attention of the group and defining some of the main values to be gained from taking English, the teacher worked with the class to organize committee work leading to an assembly presentation. As you read about the specific activities of the teacher and students, you probably asked questions such as these: (1) Does a circular arrangement of seats tend to focus attention toward the teacher and put students on their best behavior? (2) Do students suggest the more important values—improvement in speaking, reading, and writing—to be obtained from a course? (3) Were the problems—using the telephone, making introductions, dating, and conducting conversation—significantly related to adolescents' making friends and also to building oral communication skills? (4) Can a class, during the first or second week of school, be organized effectively into committees? (5) Is a technique other than small group work more ef-

fective for studying these problems and developing social interaction skills while doing so? (6) Does a tenth-grade class like to present dramatizations, cartoons, and printed materials at an assembly? On the basis of your experiences in elementary, secondary, and college classes, you evaluated the procedures which were presented by asking questions like those above. Probably, where you had no experience similar to the one proposed, you decided to try it out to check the outcomes listed with those you obtain. If you recalled a number of related experiences which worked well, you decided the procedure was good; if you had many previous unpleasant experiences, you decided, perhaps, that the procedure was not good or else analyzed the situation more closely to discover how it might have been arranged better. Also, you probably checked your ideas in discussion with others and by reading other professional books.

Many books in secondary education have sections or chapters on how to build units. Methods books in particular subjects or fields frequently stress logical organization of subject matter as the basis for planning. General methods books often stress a particular teaching method—the Dalton plan, Morrison method, project method, or problem-solving method. In the framework for a teaching unit presented in Chapter 6, which was followed in the next two chapters with more specific examples of unit teaching, activities of the students were given major attention in line with the idea that learning is an active, developmental process and that subject matter, methods, and materials should be utilized which make learning activities meaningful for the students. Is this a sound basis for planning and teaching? Besides checking your own background of experiences related to the question, you might read a discussion of unit teaching in a methods book in your major field, one in your minor field, and a general methods book to evaluate the materials presented. Similar procedures along with teacher-led discussion help high school students evaluate news stories and editorials, articles in magazines, and accounts or interpretations of events presented in textbooks and supplementary references. Questions to guide students in such reading and discussion might be: (1) What facts were presented? (2) In what respects are the accounts alike? (3) In what respects do the accounts differ? (4) Which encourage the reader to

accept the material without examination? (5) Which encourage the reader to test the conclusions?

METHODS FOR LOCATING INFORMATION

Locating the kind of information needed to carry out independent study is a major responsibility of students. Guidance of this aspect of study needs close attention by the teacher. Using the dictionary, locating reference sources suitable for study and using them efficiently, and using the library are skills which may be developed in any class in the secondary school.

Practice in Use of the Dictionary. The unabridged dictionary is a most valuable source of information. Used properly, the dictionary helps students in identifying word meanings which improves reading comprehension, in pronouncing words correctly which improves oral expression, and in spelling, syllabication, and punctuation which improve written performance.

Depending upon time factors in relation to the study at hand, a quick survey of the various parts of the dictionary may be undertaken as a starting point for building understanding of its uses. The dictionary often includes sections dealing with syntax, etymology, rules for punctuation, maps, a list of principal cities, a list of abbreviations, a list of words related to specific subject areas, and a phonetic key.

A relatively simple exercise to help students identify word meanings may follow this pattern: Select words from a given assignment. Hand these to the students in printed form with space for writing the definition and three or four synonyms. Then the students begin reading. As they read and come to each of the selected words, they check the definition or synonym which most nearly fits the word in the particular context. This practice assumes that students are able to find the word quickly in the dictionary.

Practicing to use the dictionary for correct pronunciation should be undertaken with each student having a copy. Select words from an assignment to be read or those which arise in class discussion of a problem. These words should be selected purposefully to help students understand syllabication and diacritical marks. When the first diacritical mark is found and a word is incorrectly pronounced, refer the students

to the key to pronunciation. Some practice may then be given to using the key. As students continue looking up the word list, they may refer to the key in self-practice. Length of practice on diacritical marks at a given time should be decided by ascertaining where the students are in this skill. Lengthy, monotonous practice on diacritical marks weakens interest in dictionary use.

The dictionary is a ready source to discover whether a word is incorrectly spelled. However, using a dictionary for getting a correct spelling is difficult for many students because they cannot locate the word. Our English language is so nonphonetic—e.g., the sound "sh" is spelled some twenty-one different ways—that spelling is necessarily difficult even for adults. A major task in helping students find a correct spelling is to encourage them to persist until they find the word. Teacher assistance must be readily available when needed or the student becomes discouraged, quits, and gives up this aspect of dictionary use permanently. For words that are reasonably well spelled, the dictionary is useful to discover correct placement of diphthongs, double or single consonants, dropping or adding a vowel or consonant with prefixes and suffixes, capitalization, and use of the hyphen.

Practice in Use of Reference Materials. The dictionary is a most commonly used reference material. Here is a list of five references which are kept in the classroom, in the school library or study hall, or in the community library:

1. Atlases
2. Encyclopedias
3. U.S. Census Report
4. *Who's Who*
5. *World Almanac and Book of Facts*

Many other reference books related to subject areas are also found in larger libraries.

In guiding student use of references, those which will be used most frequently should be brought into the classroom and previewed. Procedures similar to those followed for surveying the dictionary may be employed. The purposes of the survey are to become acquainted with the organizational pattern, to find specific information in each book,

and to identify which reference book is most useful for securing a particular type of information.

After the general survey is conducted, specific assignments may be made. Depending upon how well the students are now acquainted with the reference books, the assignment may include questions like (1) What is the latitude and longitude of the capital of Iran? (2) Which countries lead the world in production of oil? (3) How much did the population of the United States increase from 1930 to 1940? (4) What contributions did Cordell Hull make to American international policy? In this assignment, assistance must be given to students, as needed, for deciding the best reference source and for locating the subject in the selected book. For a class which has had little practice, better procedure is to investigate one reference book at a given time and give definite assignments to locate specific information in it.

Practice in Use of the Library. The card catalogue is a guide for locating books. Guides to periodical literature list magazine articles. The card catalogue employs subject, title, and author listings to help locate books.

Frequently, libraries use the Dewey decimal system for classifying books. It is helpful to understand the system but not essential. It is more important to be able to use the card catalogue to secure needed information and then to locate the book in the library or to give its identifying call number to the librarian.

Practice in securing library books may take this form: Bring into the class exact reproductions of cards in the card catalogue. Distribute these to the students. Discuss a card to note the information it contains: call number of book, author, title, subject, date of publication, number of pages, illustrations, etc. Emphasize the significance of the call number and, if the Dewey decimal system is taught, introduce it at this point. Next, examine the cards to identify three types: author card, title card, and subject card, so that the students know which to look for in terms of the information they possess concerning a book or subject. When these steps are concluded, take the students to the library to survey the card catalogue layout. Following the survey, each student finds the cards in the catalogue which are identical to his author, title, and

subject cards. Next, a survey of the stack arrangement to locate books by call number is undertaken. Then each student finds the book designated on his cards. Inspection of the books may follow the practice outlined previously for previewing a textbook.

The style of guides to periodical literature follow a pattern similar to that of the card catalogue except that no numbering system is used and the identifying information is printed in a book. The *Reader's Guide to Periodical Literature*, in an abridged edition, is usually kept in the larger high school libraries. The *International Index to Periodicals* is frequently available in community libraries. The *New York Times Index* is an important guide to newspaper stories. Special area guides like the Agricultural Index and the Dramatic Index are found only in larger libraries.

To acquaint the students with the *Reader's Guide to Periodical Literature*, bring copies into the classroom. Yearly and supplementary volumes may be included. Survey the organization of the *Guide*. Have each student find an article which is closely related to the problem or topic being studied. Check to make sure that the library contains the periodical. Go with the student to the periodical room to make sure that each student finds the article. This is especially important in libraries where more recent articles are in shelves and the older ones are bound. The card catalogue must be used to get the call number of bound volumes.

After the card catalogue and the guides to periodical literature are understood, a broader assignment may be undertaken. Thus, during UNESCO Week, committees may be formed to secure information about UNESCO—its organization, its functions, the services provided, and the like. The library is visited; possible sources of information are listed; they are checked in committees or with the teacher; and each student then secures the material to get information. In class, the various articles, books, and pamphlets are evaluated. An advanced group may make its own evaluations in committees and report them in class.

You may feel that the directions listed in this chapter are too specific and leave little to the resourcefulness of students. Often teachers do not realize that many of their study skills were acquired in college, not in high school. The ability of students to develop study skills independ-

ently is often overestimated. Too frequently in the junior and senior high school, teachers simply start with a suggestion to students to secure information without carrying out the instruction necessary to make it more than blind searching. As we investigate some of the characteristics of slow and fast learners, the need for specific guidance of students' study methods becomes more apparent.

PROBLEMS OF THE SLOW AND FAST LEARNER

Students who are low in verbal and abstract abilities have the most difficulty with high school work; those who are highest in the same abilities have least difficulty. The social studies, English, science, and mathematics classes, required of all slow students as well as the fast, are main contributors to student maladjustment connected with classroom work.

Fortunately, abilities within an individual do not exist in equal degree; usually each person has some ability—motor, artistic, verbal, or social—which when carefully nourished and developed helps him to become a respected member of his classroom group, his home, his school, and his neighborhood.

In examining characteristics of slow and fast learners we shall identify clues for helping them develop work and study methods related to their abilities.

THE SLOW LEARNER

What are some of the characteristics of the slow learner by the time he has reached the ninth grade? Here are brief statements describing a slow learner who is healthy and of average physical development. As you read the descriptions, cross out those which do not apply to a slow learner whom you have known.

1. He is above average in age for his grade.
2. His mental maturity is below average with IQ score 90 or lower. His mental age is one to five years below the class average.
3. His average marks in previous school work are low.
4. His tested achievement in reading, arithmetic, English usage, science, and social studies may be average in one or two areas but usually is eighth-grade placement or lower.

5. His tested achievement in work-study skills may be average but usually is eighth-grade placement or lower.
6. He dislikes the subject in which he does poorly.
7. He frequently feels inferior to other students who learn more readily than he does.
8. He does not like to read textbook materials or to work textbook problems.
9. He gives up easily in attacking school work.
10. He overcompensates or withdraws in the classroom.
11. He enjoys performing simple, routine tasks.
12. He may be average or above in motor skills.
13. He may be average or above in art and music.
14. He may be above average in sociability and get along well in curricular activities, in his home, and in his neighborhood.
15. He may be above average in emotional stability.
16. He is active, not lazy.
17. He is meeting the same developmental tasks as other adolescents.

Check any seventh-, eighth-, or ninth-grade class against the first five characteristics. When the 10 to 25 percent of the class are identified on four of the characteristics, check this group on the next five characteristics. If they exhibit these behaviors also and you are really concerned about helping them, continue your investigation to discover their interests and strengths which may be nourished and used to good advantage in classroom work.

What may be inferred from the above description concerning study methods appropriate for the slow learner? The slow learner needs much assistance and many specific directions. In using a reference book after having surveyed several books, he will not readily select the best one but must be told which to use, including specific page numbers. He will not select books wisely in the library except with considerable assistance. Better procedure is to bring suitable books into the classroom.

His assignments need to be very clear and specific, including exact steps in carrying them to completion. He will need help with the hard spots. His known strengths and interests must be capitalized upon to help him build confidence, develop further interest, and continue work-

ing. Audio-visual aids should be employed to further his understanding of the more important concepts, generalizations, and processes related to the classwork. Frequently he needs to be told relationships because he does not discover them himself, especially verbal and abstract relationships. Reading materials suited to his level of reading achievement with interest appeal pitched at his physical and social development must be located if he is to continue reading.

The teacher must not expect this student to become a superior student within the period of a semester or year. He will respond to excellent teaching and will show considerable improvement. He will surely be discouraged by the teacher who nags at him for being slow or lazy, who makes him "stay in" to keep up with the class, who singles him out for homework assignments, or who gives him common assignments with the whole class. Many slower students try to keep up with the class voluntarily when they know the teacher is interested, is trying to help, and gives encouragement.

THE FAST LEARNER

The fast learner may be described using the same criteria as for the slow. He is in the average or lower age group, shows rapid mental maturity, has above average achievement, his grades are high, his work skills are average to highest, he likes school generally, he recognizes his superiority, he carries assignments to successful completion quickly, and he finds reading assignments easy if not always interesting. Other characteristics listed for the slow learner also describe the fast except that the exceptional learner is frequently high in all of them.

To identify the bright students, careful analysis of their tested abilities must be made. Fast learners should be identified. The upper 5 to 25 percent of the students in the class will become the superior teacher and administrator, the physician, lawyer, composer, artist, scientist, research engineer, or governmental expert, among others.

The more important guides for helping the fast learner develop efficient study methods are to provide a rich variety of interesting materials; to use flexible assignments which challenge his interests and abilities; to give him leadership responsibilities in group work, especially for locating information, analyzing it, drawing conclusions, and

writing up the findings; to encourage him to contribute creative ideas and to assume responsibility in independent study for carrying work to successful completion.

The procedures outlined for helping slow and fast learners need not necessarily constitute a teaching dilemma. Obviously, the teacher with five or six classes of forty different students cannot be highly successful in helping both groups to best advantage. With a reasonable teaching load and in a relatively short time at the beginning of a course or unit, the teacher is able to help the fast learners build the adequate study skills described in this chapter. Their high achievement facilitates getting class work started quickly with relatively few trials. As the fast learners get started efficiently, the teacher has more time for helping the slow and average. To spend undue time at the beginning of a class or unit with the slow learners, thus neglecting the fast learners, inevitably produces mediocre performance and poor study methods.

SUMMARY

We evaluate a student's work or study methods by noting (1) how quickly he gets started to work, (2) how well he uses time and materials, (3) how consistently he concentrates on the work at hand, (4) how well he completes the work, and (5) how well he judges the adequacy of his performance and conduct. To assist boys and girls in developing more effective study methods, we must identify the characteristics of the students which affect study and characteristics of the learning situation which affect the methods employed. Through such appraisal we are able to set up teaching procedures designed to produce more effective study and work methods.

Study methods vary for given kinds of learning, but through an analysis of those used in reading we are able to identify the basic generalizations which may guide the teacher who attempts to help students in building five important skills: surveying the task to secure an overview of it, getting a task started quickly, getting meaning from the work, concentrating on the work until it is completed, and organizing the whole process sufficiently well so that it is retained permanently. Another task specific to reading is using the textbook, reference sources, and library materials. In examining the detailed practice procedures for

the building of various study skills, note was made that whole-class practice tends to be uninteresting for fast learners and must be repeated often for slow learners.

Slow learners and fast learners must be identified early if the procedures recommended for developing effective study methods are to work. Fast learners build efficient study methods quickly and proceed to carry challenging and varied work activities to successful completion. This ability gives the teacher more time to help the slow and average, who need more attention throughout the learning activity.

QUESTIONS AND ACTIVITIES

.....

1. Using the five criteria listed for evaluating a student's work methods, rate yourself on each on the basis of excellent, good, fair, or poor.
2. Observe three or four students in a high school or college class and note for each (a) exact amount of time used to get started, (b) amount of time actually spent in work activity, (c) amount of time not used in work, and (d) how materials and tools were handled.
3. Discuss how situational characteristics affect students' work methods in the classroom. Which of these may the teacher control most effectively? How?
4. What are the basic study skills related to reading? In what other types of school work do these apply?
5. Using this or some other textbook, appraise the proposals for previewing a textbook.
6. Secure a textbook used in a high school social studies or literature class. Using the guides listed for surveying a chapter, can you secure an overview by following them? Could the students for whom the textbook is intended?
7. At what grade level and in what classes may practice of the type suggested for securing meaning from paragraphs and units be employed?
8. List the factors which keep you from concentrating on work. Make a list of factors which may keep adolescents from concentrating. What may a teacher do to help students concentrate?
9. Explain a method for helping students to evaluate critically what they read.

10. What are the principal uses which may be made of the dictionary and other reference books in the high school? Which of these should be kept in the classroom?
11. List the reference books with which every teacher should have working knowledge. Outline procedures for surveying each and demonstrate the procedures.
12. Discuss the most important skills students should possess for efficient use of the school and community library. What is the best method for teaching students to use the library wisely?
13. How do the slow and fast learners differ in work methods?
14. Outline a plan for helping both slow and fast learners develop reasonably effective study methods in relation to abilities.

REFERENCES

-
- Brink, William G., *Directing Study Activities in Secondary Schools*, New York, Doubleday and Company, 1937.
- Douglass, Harl R., and Mills, Hubert H., *Teaching in High School*, New York, The Ronald Press Company, 1948, chap. 9.
- Educational Policies Commission, *Education of the Gifted*, Washington, National Education Association, 1950.
- National Society for the Study of Education, *The Education of Exceptional Children, Forty-Ninth Yearbook*, Chicago, University of Chicago Press, 1950, Part II.
- Rivlin, Harry N., *Teaching Adolescents in Secondary Schools*, New York, Appleton-Century-Crofts, Inc., 1948, chap. 9.
- Wrenn, C. Gilbert, and Cole, Luella, *How to Read Rapidly and Well*, Stanford, Stanford University Press, 1935.

Developing Creativity and Aesthetic Appreciation

Four major factors related to creativity and aesthetic appreciation appear to be operating in American life: (1) A relatively few persons are designing the mass-produced objects so widely used in our daily life; all of us are affected, increasingly, by the beauty or lack of it incorporated in these objects. (2) A relatively few persons are creating the music which is so widely heard via radio and records; we are all affected by the quality or lack of it in radio programs and records. (3) A relatively few persons are creating the literature which we read; with mass production and widespread distribution of printed materials we are greatly affected by what we read. (4) Shorter working hours, more economic security, and increased educational opportunities should lead to greater release of energy in creating better art, music, and literature. The visual arts, music, and literature of America should be an integrating force in our daily life. For the arts to be integrating, it is probable that more persons need to assist in producing them and more persons need to build preference for the better types. Secondary education is a major social means for building creativity and aesthetic appreciation.

There are many media in which boys and girls may express themselves creatively and build aesthetic appreciations. Mainly, we need to develop techniques for identifying students with high aptitudes of all kinds, discover methods for developing such aptitudes more efficiently, and give sufficient emphasis in the whole school program to helping

youth develop aesthetic types of behavior. In some schools this program calls for more emphasis on organizing teaching-learning situations to develop aesthetic behaviors in music (playing an instrument, singing, and composing), in the visual arts (designing, painting, sketching, decorating, and drawing), in the language arts (creative writing, dramatizing, and speaking), and in physical activities (social dancing, folk dancing, and ballet).

In this chapter, seven major factors related to creativity and aesthetic appreciation are first explored for the purpose of assisting teachers to identify students who possess creative talents. Following this, high school programs in the visual arts, music, and the language arts are investigated for the purpose of helping teachers enrich school life for themselves and for their students.

FACTORS RELATED TO CREATIVITY AND APPRECIATION

A degree of creativity in some area of expression is universal among human beings, as is the closely related ability to appreciate. The more important factors related to creativity and appreciation are (1) physical and mental potentiality, (2) motivation, (3) skill in use of materials and tools, (4) self-expression, (5) imagination, (6) discrimination and perception, and (7) emotionalized feelings.

PHYSICAL AND MENTAL POTENTIALITY

Abilities may lie in a number of different areas and may be expressed through different media. For an individual to express himself creatively in a given area through a particular medium, he must possess the requisite physical and mental potentiality. The artist singer has a well-developed vocal mechanism and keen auditory discrimination. The sculptor possesses a high degree of manual dexterity combined with keen visual perception. The musician has high manual dexterity and a keen sense of auditory discrimination. The poet possesses high verbal abilities. The artist dancer has a well-proportioned body and high neuromuscular coordination. The better artists in all areas are known to have high verbal abilities as measured by intelligence tests. Exactly what level of superiority in the various characteristics is needed to

make an original contribution to the art and life of a culture is not known. It is known that one does not need exceptional physical or mental characteristics to produce an object which satisfies himself. Further, physical or mental characteristics comprise only one aspect of creativity.

The term "potentiality" rather than "hereditary characteristic" is used because it is not certain to what extent neuromuscular coordination, visual discrimination, auditory acuity, intelligence, and the like are inherited. It is certain, however, that these physical aptitudes markedly influence the individual's ability to create and to a lesser degree his ability to appreciate. Teachers should be aware of special characteristics which students exhibit so that their potentialities may be discovered. Many tests are available to measure these characteristics. Besides tests, teachers may note students who show high motivation in particular areas of expression and appreciation.

MOTIVATION

In a high school class which allows some freedom of expression, the student who has creative abilities tends to show interest in the area where his aptitudes lie. Also, the students who have already developed preferences exhibit them in their daily activities. The adolescent girl with artistic ability likes to arrange the bulletin board. The boy with high abstract ability likes to draw designs. The girl with an excellent singing voice likes to sing popular songs to entertain her friends.

Besides liking activities wherein aptitudes may be expressed, adolescents persist in such activities to achieve a better performance when encouraged by the teacher. Why is it that an individual persists in his efforts to play a musical instrument, to perfect a dance, or to make an attractive silver ring? Does he practice to compensate for a deficiency in some other area? Does he persist to experience the thrill which comes with mastery over things? Did his parents or teachers encourage him to practice, starting at an early age, and thus a habitual pattern of behavior evolved? Doubtless, many factors operate which lead an individual to persist in concentrated study and practice. As we teach adolescents, it is important to recognize aesthetic interests when they

are manifested, to encourage the individual with interest and aptitude to persist, and to make opportunities available for him to learn the understandings and skills needed to express himself most effectively.

SKILL IN USE OF MATERIALS AND TOOLS

In expressing oneself in the ballet or pantomime, skill in use of materials and tools is not so highly important as it is in crafts, music, literature, painting, sculpture, and architecture. One cannot draw a picture or even take a picture well with the camera except as he has developed specific skill in using materials and tools. One cannot write a friendly letter unless he can use tools and materials—words, sentences, paper, pen, or perhaps the typewriter.

The younger child with creative ability in painting is superior to another in skillful use of materials just as one child is superior to another in handling blocks or in beating a drum with a definite accent and rhythm. Environmental factors affect the development of skills and are highly influential during childhood and adolescence. One cannot accurately appraise an adolescent's aptitudes on the basis of his present skill in using materials and tools except by knowing the environmental conditions which have operated thus far in his life. All teachers should, however, be alert to recognize superior skill in use of materials in their classrooms as one means of identifying those students who may profit from special help or placement in special courses.

Besides identifying students with already developed skills, it is equally important to teach students skills. Methods for developing specific skills will not be discussed at this point. No statement of the relative values of educating for "manual" and "mental" skills is in order except to point out that the musician, the painter, the interior decorator, the textbook designer, and the comic-strip artist have developed a high degree of skill in use of materials and tools. Without such skill, self-expression remains at a relatively low level.

SELF-EXPRESSION

Human beings are intelligent and learn to understand themselves in relation to others. As a person perceives his own role with reference to others, he may learn to express himself in a unique or individualized

way which enhances his relations with others and at the same time improves his own construct of himself as a worth-while individual. Thus, one may think of himself as a more worth-while person if he can make others happy by singing. Also, human beings attempt to master aspects of the physical world about them to gain better control over things. For example, the child practices on the piano until he can play a melody which he desires to reproduce. These two forces are the chief energizers of self-expression and are commonly operative among adolescents in classroom situations.

Children early in life exhibit considerable originality in various media of expression such as singing, dancing, painting, and composing original stories or verses. Much of this expression is spontaneous and in no particular form which lasts. Occasionally it persists as unique behavior. As children grow up in a society of other human beings, they learn the socially approved forms of expression as part of the culturization process and drop some original forms. To some extent, originality must be dropped for the individual to profit from previous experiences of the human race. The optimum condition is for the child to learn culturally approved forms of expression, become well adjusted in his social groups, and at the same time learn one or more unique methods of expression which enhance his concept of self in relation to others.

Characteristically, the adolescent who responds to aesthetic experiences is expressive. He has developed techniques of expression which enhance his concept of self and which help him feel the thrill which comes from control over things—mastery of words in writing a sports story or poem; mastery of speech, action, and emotions in dramatizing; mastery of bodily coordination in a rhythmic dance; mastery of instrument and symbols in playing the piano; or mastery of art materials and tools in making a leather purse. Other examples might be cited which illustrate the creative aspects of expression wherein the individual executes his ideas in some form thus gaining mastery over some physical aspect of his environment and enhancing his concept of self as a worth-while individual. Teachers need to identify expressive individuals and find an area of activity in the classroom where the adolescent may develop his expressive abilities. This means, among other things, that adolescents need some freedom in carrying out imaginative ideas.

IMAGINATION

Some persons are able to reproduce, in retrospect, what they have seen or heard years previously. An adolescent girl recalls the wet snow hanging on the trees two years ago on Christmas morning. When Christmas carols are sung, she sees all the details and feels as she did then. A boy recalls his first view of the Pacific Ocean many years ago. As he gazes over the barren plains from the school window, they become the broad sweep of the Pacific. These individuals are high in eidetic imagery. Some persons are very low in this ability. They cannot recall the broad characteristics of a previous experience or their feelings about it except at a low level.

Bringing back to reality a former experience is one aspect of imagination. In creative expression, imagination brings the previous experience to bear upon a present idea or conceptual pattern and projects it into a future performance. The high school student vividly recalls Maurice Evans' portrayal of Hamlet. It is now his personal interpretation. He projects himself into the role of Hamlet eight weeks hence in the community play. The geometry student imagines form coming to life in the design of a home which "fits" the contour of a hill overlooking the bay. The high school girl sees the broad outline of the rhythmic movements in her dance which interprets "first love."

Adolescents with lively imagination are not particularly hard to identify in permissive classroom situations which encourage free expression. The girl interested in dancing will probably carry out her imaginative ideas. The imaginative geometry student will express his ideas for the design of the home if applications to the present study are encouraged. The dramatist will portray "his" Hamlet unless forced to follow a set pattern.

SENSITIVITY, DISCRIMINATION, AND PERCEPTION

These are closely related terms; each carries sensory capacities such as seeing and hearing into a broader aspect of integration with aesthetic judgment. To appreciate rhythm or color, one must be sensitive to it. The person unable to distinguish between green and red is insensitive to these colors and is incapable of appreciating them in objects in which

they are used. Discrimination goes beyond sensitivity in that it applies to a broader patterning of sensitivity. An individual moderately sensitive to red may note three or four hues which are widely separated; the discriminating individual identifies many hues. Perception continues beyond elementary sensory discrimination. The individual with high perception notices the decoration of a living room and perceives how various hues of red blend with other colors to produce an effect of beauty.

These same operational definitions may be applied to listening to music, dancing to music, listening to poetry, and the like. Sensitivity to color, sound, rhythm, and form is requisite for aesthetic responses. Adolescents vary widely in perceptual abilities, but all who are somewhat normal in sensory abilities may be taught to discriminate and to build aesthetic judgment.

AFFECTIVITY, MOOD, AND EMOTION

It is possible that a musician plays skillfully and yet does not appreciate the performance of others. Appreciation involves feelings.

Positive affectivity or pleasantness is a component of aesthetic experience. Preferences for color and tone build within an individual as he matures. Also, groups of persons in various cultures show preferences for specific colors, types of music, and ways of physical expression. Affectivity is strongly influenced by characteristics of the specific situation. A musical performance may be pleasant in one setting but not in another. A painting is appropriate in the living room but not in the kitchen. To appreciate, one must have pleasant feelings connected with experiences in given situations.

A poem, painting, or dance may do more than arouse a feeling of pleasantness or unpleasantness. The total effect may be to produce a mood which carries beyond the immediate experience. After reading "The Raven" an adolescent may leave the classroom with a definite feeling of futility. Then he hears a stirring march and gets in the mood for seeing the football game or joining the Air Force.

When an individual imaginatively identifies himself with Shelley in "Ode to a Skylark," he may exhibit emotional symptoms such as deeper breathing, faster pulse rate, or paling. One should not infer that the

creative artist or the person who appreciates deeply is under high tension. Rather, appreciating involves identification with the idea or feeling expressed and control of the emotion so that it is pleasant but not disruptive. Through close observation, the teacher is able to discover adolescents who identify themselves with ideas and feelings expressed in various artistic forms.

In varying degrees adolescents may be taught to identify themselves with the ideas, thoughts, and moods which are expressed in the visual arts, music, and literary forms. They may be taught to respond with deeper insights and feelings to beauty or lack of it in their surroundings. They may be taught to develop their expressive powers more fully. The arts program in the secondary school should build these types of aesthetic responses.

THE VISUAL ARTS PROGRAM

We recognize that if able students develop their potentiality to the fullest, excellent instructional methods rather than laissez-faire or hit-and-miss procedures must be provided in the school. We recognize that if students are to become sensitive to art in their daily living and to prefer beautiful things, excellent instruction must be provided for that purpose. What should the school art program do for youth?

Mendelowitz outlines four major functions of the high school art program. These follow in abbreviated form:

1. The art program should help all students to develop abilities in graphic and plastic representation to the degree to which these will be valuable to them as a means of clarifying conception and as a means of communication. Drawing and using color facilitate the learning processes which involve an understanding of appearance. When a special art teacher is not available, other teachers should give instruction in the necessary techniques.

2. The art program should develop in all students an ideal of beauty which is in harmony with modern technology and modern democratic concepts. A consideration of the functional expressiveness of homes, municipal buildings, furniture, advertisements, clothes, motion pictures, and sculpture should constitute the major part of appreciation activity rather than the study of historic expressions such as the cathedral, the Greek temple, and Renaissance masterpieces of painting. Inasmuch as

all understanding must start with the familiar and comprehensible, the choice of subject matter should be on the level of student interests and needs.

3. The art program should serve as a major integration medium in the modern school. The illustrative function of art may be used in almost every type of school activity. In constructive-type projects, students should create art objects to clarify concepts and to communicate ideas; in understanding the life of a people or the characteristics of a process, art objects should be used to clarify understandings and to build richer appreciations.

4. The art program should equip that small group of students who have a professional interest with the basic skills which are necessary for vocational proficiency. The teaching of basic skills in drawing, painting, composition, commercial and industrial design, and lettering should be accomplished by the development of a technique for utilizing these skills in society. Art activities in these classes should grow out of the life of the school and be aimed at making school life expressive and effective. Design of school publications, the planning of school grounds, the decoration of the school rooms, the designing of products in shop and crafts classes, and decorating the stage are some of the projects which may be useful for achieving these purposes.¹

If perceptual facility, creative imagination, and aesthetic judgment may be learned, then it appears that the teacher in the science, social studies, or English class as well as others may attempt to promote in students visual enjoyment of color, line, and movement, ability to gain ideas and information by using art objects, ability to appraise works of art in terms of function, and preference for the more beautiful in their environment. The teacher of art, as well as other teachers, has specific responsibility for helping able students develop their expressive powers in creating art objects. Similarly, the home arts and hand crafts program are worthy of special attention.

THE HOME ARTS

Artistic discrimination in use of color, materials, and arrangement is an important factor in choosing and making clothing, in setting a

¹ The Stanford University Education Faculty, *The Challenge of Education*, New York, McGraw-Hill Book Company, 1937, pp. 140-145.

dinner table, in decorating a living room, and in landscaping. To decorate and furnish a home within a fixed budget and yet make it artistic and comfortable involves both creativity and appreciation. The home arts teacher attempts to help boys and girls do these things in various classes. At some time in the future most students now in school will meet these problems whether or not they have had any instruction designed to help them.

In general, the home arts teacher uses a practical approach to instruction. Usually the classroom is arranged artistically with furnishings and materials commonly found in the home. Cloth materials in various colors, patterns, and textures are brought into the classroom; and the students, with the help of the teacher, decorate the classroom, the principal's office, or the teachers' lounge. Girls undertake projects to decorate their own rooms at home or to decorate the living room in their home with the consent and coöperation of the parents. A meal is served to the PTA and the class decorates the room, arranges the service, etc. Many adolescent girls like to keep scrapbooks and to design. They secure pictures, sample materials, and make sketches of the home in which they want to live—all artistically arranged in the scrapbook. Activities like these, closely related to the lives of the students, may be highly significant in developing aesthetic appreciation. Without much doubt, the girl who is low in verbal abilities or who does not draw or paint well profits more from these activities than from studying the history of art, reading about factors related to aesthetic responses as discussed previously in this chapter, or looking at the paintings and sculpture of the masters.

HAND CRAFTS

Our larger high schools have classes which incorporate art work in ceramics, metal, leather, wood, and furniture making. Generally, students in these classes produce objects of varying artistic quality which they use immediately. Often they copy designs; nevertheless, an object is produced which is a primary source of satisfaction to the student and to his parents.

In general, the craft teacher's emphasis is directed toward the utilitarian and decorative aspects of art. A leather purse, a silver ring, a

brass ash tray, the base of a table lamp carved from wood, a toy for a younger child, book ends, a glazed vase, and the like are produced by students, who try to make them artistic.

Instruction in the hand crafts requires materials and tools which are expensive—much more expensive than a history-of-art textbook, colors, brushes, easel, and paper. Is the additional cost worth the outcome? Unfortunately, there is insufficient evidence at present to draw definite conclusions concerning the effect of hand-craft experiences in building aesthetic creativity, judgment, or appreciation. The college student who expects to teach in the secondary school and all teachers in service should visit a modern crafts class to note (1) how students respond to the work situation, (2) the quality of the objects being produced, (3) the craft teacher's evaluation of the effect of the activities in building student interest in the visual arts, and (4) the possibilities for having students in the crafts class assist in decorating and bringing art materials into other classrooms.

ART IN MANY CLASSES

Generally, public high schools operate on the assumption that students with high interests and talents should receive instruction in special art classes in each grade as the school is able to include a rich program of art instruction. Also, each student, except the color-blind or partially blind, is able to appreciate the visual arts to some extent; therefore, the classroom should be attractive, art objects should be brought into the classroom wherever they will improve the learning situation, and students should create art objects as part of their regular class and out-of-class activities. Special classes in art appreciation are not needed when all teachers are concerned with helping students appreciate the visual arts.

How may art appreciation be encouraged in most classes? The display area or bulletin board may be a work of art in itself, used to teach visual discrimination, artistic imagination, and aesthetic judgment. The selection of pictures and materials for the display, along with use of color and arrangement of the materials, builds appreciation when carefully directed by the teacher. Further, when student committees take responsibility for decorating the bulletin board once or twice per month

and when someone who understands art leads a discussion of the students' work, a level of creativity in use of art materials may be assured. Student assistance in procuring and arranging flowers, in arranging the furniture, and in decorating the whole room may help create interest in the visual arts. Each classroom teacher may encourage coöperative effort in beautifying the room and may lead informal discussion of the work as a means of building student preference for the better types.

As suggested in the discussion of audio-visual aids in Chapter 10, paintings, slide films, moving pictures, and photographs or movies taken by students may be used in many learning activities to make them more interesting and meaningful and at the same time to build standards for appraising beauty in the visual arts. Especially in social studies, literature, and foreign language classes, not using art objects and not having some students express their ideas through some form of the visual arts leads to unnecessary sterility in the teaching-learning situation.

In schools where the core class meets for two or more hours per day, it appears imperative that attention be given to teaching art skills and appreciation because there is not sufficient time for all students to take an art class as an elective. Probably some time should be given in the core class to exploring beauty or lack of it in community buildings and parks, in the school, and in homes. Projects may be undertaken to help students develop better taste in personal grooming and wearing apparel for given occasions. In connection with any learning activity in which drawing, using graphic or plastic representations, painting, or lettering will help clarify ideas or communicate more effectively, students should be helped to develop the skills. The teacher who has insufficient ability to help students in building these skills should consult the regular art teacher, or the art teacher may work in the core class directly. Besides teaching art classes, the art teacher should give assistance to other teachers in selecting art objects for use in their classes, in decorating the room, in getting needed materials for students' work, in setting standards of evaluation, and in identifying students with pronounced talents.

THE MUSIC PROGRAM

Some students sing or play a musical instrument better with equal amounts of practice than do others. Some students cannot be taught to read notes efficiently, just as others cannot be taught to use tools in the shop, to spell words, or to solve algebra problems at a high level of skill. We should probably not require all students to sing, to read notes, and to play a musical instrument. Should we, however, attempt to develop at least one music skill in each child and build appreciations of music in all students except those with extreme sensory deficiencies?

Dykema and Gehrkins pose eight issues which indicate the extent to which the function of music in the high school program is as yet unclarified. The issues are presented and the authors' viewpoints on each are summarized. As you read each statement, decide your role in helping students to develop their creative and appreciative powers:

1. Who shall receive music instruction? Opportunity must be provided for all children to obtain enough acquaintance with music so that it will be a vital factor in their lives. In so far as feasible under local conditions, opportunity must be provided for more talented students to develop their abilities.
2. Should music be required or elective? A course in music should be required in one or two years of the junior high school for all students and should be a "required elective" in one year of the senior high school.
3. Should music be taught integrated with other subjects or separately? Whether it is taught in an integrated course or as separate courses, enough time must be allotted to music, *per se*, for more specialized treatment of our art which proficiency in its practice and understanding demands.
4. Shall music instruction be primarily for appreciation or for building technical skill? The two proceed hand in hand and should not be separated. If choice must be made between listening for appreciation and performing to build technical power, the latter is preferred.
5. Shall music instruction and equipment be provided at public or

private expense? Elementary instruction on all orchestra and band instruments should be at public expense.

6. Shall music be evaluated as a study or as an influence? Both, but special emphasis must be placed on influence. Coöperative festivals, for example, are preferred to competitive contests in situations where students have unequal opportunity to develop skills.

7. Shall music offerings be limited to curricular, with credit? This problem should be worked out in each school in a spirit of mutual cooperativeness so that curricular and extracurricular activities are possible.

8. Shall the music teacher be selected principally for his performing ability or for his leadership? If a choice must be made between the better musician who cannot teach well and the lesser musician who can teach inspiring, the latter is preferred.²

Our larger schools are able to carry out a better music program than are the very small schools. What may be an issue in one school may not be in another. Disagreement exists in many schools, regardless of size, as to whether the performance or the appreciation and use aspect should receive major emphasis. You may appraise the eight points of view expressed above by considering your own ideas of the function of music in the life of high school students. Your author's views will now be expressed and may help to clarify the types of music activities which should be provided in a well-rounded program of instruction.

SPECIAL AREAS IN MUSIC INSTRUCTION

Students with musical talents should be given special instruction whereby they learn to sing well, to play musical instruments, or to compose. The larger modern high schools organize courses in chorus, glee club, and other voice classes, in orchestra, and in band. A well-rounded program maintains a balance in the three areas of instruction.

In the junior high school, courses should be offered in some phase of voice development, orchestra, and band. These should be elective, carried out during regular school hours, and given credit as are other

² Peter W. Dykema and Karl W. Gehrkins, *The Teaching and Administration of High School Music*, Boston, C. C. Birchard and Company, 1941, pp. 13-29.

courses. Students with keen interest and talents may take one or more of the courses each semester and they may take them during one or more junior high school years. Probably, releasing junior high school students with musical talents from a study period or an elective class for instruction in music improves rather than weakens their whole educational program if excessive demands are not placed on time outside the instructional period for practice.

In the senior high school the same type of elective courses should be organized except that they may be more advanced, and students who major in music or fine arts may take advanced work such as music theory, orchestration, history, and the like. A major purpose of the high school chorus, orchestra, and band is to help students give a more worth-while performance than may be accomplished individually. This is an important value. However, many students will not perform in large organized music groups after graduation or play band and orchestra instruments outside these groups. Therefore, instruction which helps individuals develop performance skills individually or in small groups is also important. Special attention should be given to instruction on instruments like the piano or violin which are well suited to individual enjoyment. Also, music groups such as the dance band, string quartet, or vocal duet need to be encouraged.

A basic problem of music teachers in the secondary school is to find sufficient time to organize large-group instruction and to give individuals and small groups needed instruction. Providing for beginning students and the more advanced is also a major problem. Undoubtedly, many high schools need more music teachers. It is probable, however, that instruction will not be expanded in many high schools until more music teachers are ready to give up the idea of building high performance skills in a relatively few students at the expense of helping many less talented students learn to play or sing at a lower level but one which is satisfying to them, their friends, and their parents.

GENERAL COURSES IN MUSIC

In both the junior and the senior high school, general courses in music are needed unless music instruction is included in a core program. In the junior high school, major emphasis is usually directed to-

ward helping students discover their interests, identifying those who have marked talents, building preferences for better types of music, and developing singing abilities.

The more prevalent types of activities in a general music course include (1) singing of songs, in unison or in as many parts as the voices and powers of students warrant, (2) listening to records, (3) beginning instruction in playing instruments, (4) creative activity, ranging from participation in deciding what music shall be studied to composing and performing songs and playing instruments, (5) correlating and integrating music with other school subjects taken simultaneously, (6) group discussion to help form standards of musical judgment, and (7) maintaining music notebooks and the bulletin board related to a variety of musical events in the school and community.³

Singing for enjoyment is a major function of the general music or core class. The human voice is capable of expressing words, feelings, and emotions at a level which is pleasant and satisfying to the individual. Relatively little expense is involved in securing materials. Group singing brings a great deal of enjoyment to students in the school, the home, the church, and various community groups. Through learning words and melodies, along with some study of musical composition and composers, students are able to build aesthetic judgments and keener insights into the role of music in their lives. To what extent the larger high schools lose one of their chief unifying forces through not being able to have the whole student body join in group singing is unknown. Some of the smaller high schools use group singing as an opening exercise once or more per week and find that it helps build morale and a feeling of unity among the students and staff.

Listening to radio programs and records is another excellent activity in the general or core course. Students listen to radio programs widely and many have extensive record collections. Their listening and buying habits can be modified through instruction. As suggested in the unit in music appreciation in Chapter 8, we can teach students preferences for better types of music through organizing their learning activities according to a developmental sequence in an attractive learning environment.

³ *Ibid.*, pp. 54-55.

MUSIC IN MANY CLASSES

Though music instruction in the secondary school has made rapid progress in the past half-century, there is still a tendency for instruction to be limited to a relatively small group who are highly talented or whose parents have sufficient funds and interest to engage private instructors. Many students continue to go through the school day, semester, and year with few satisfying experiences with music. Music for a large group of students is confined to listening to radio programs and records in their homes, the band at athletic contests, the school orchestra or chorus at school "events," and sacred music in their churches.

As indicated in Chapter 10, the possibility for bringing records, radio programs, and musical performers into social studies, literature, foreign language, physical education, arts, and even science classes is very wide. The possibility for exploring the use of music in the home, church, theater, and community events of various kinds is equally challenging. Using music in any form which makes learning activities carry deeper significance is more than decorative or variety producing. The ideas expressed in songs and the mood or feeling underlying musical expression lend richness to the learners' experiences. Especially when studying the history of a people, the literature of America, the language of a people, or life within a community, students develop more fully themselves when they understand how music and the other arts have been integrated into the lives of the people. In turn, this understanding leads to greater integration of learning within the individual student.

Many teachers in secondary schools of today have had little opportunity to develop skill in music composition, playing an instrument, or leading student singing. Often such teachers feel uncomfortable in bringing music into the regular classroom and in trying to help students build aesthetic judgment. In part this attitude results from the fact that many music teachers are overcritical of the efforts of non-music teachers. When such is the case, the music teacher is not often consulted by those who need assistance in finding and using appropriate records, songs to be sung, and the like. Apparently each music teacher should be sufficiently mature to recognize that many teachers have not

developed performance skills but that they may be helped to use music to good advantage in classroom situations. In the core and other classes, the music teacher should assume a major share of responsibility for working with others to make music function more fully in the lives of the students and teachers.

THE LANGUAGE ARTS PROGRAM

Speaking, writing, and reading may be classified as language arts. Sometimes listening is also included. As discussed in Chapter 9, informal discussion, debate, formal dramatization, sociodrama, panel discussion, public speaking, and individual reports to explain, direct, or give information are kinds of speaking activities in which students may engage profitably in most classrooms. Writing includes using symbols to produce various forms of written expressions—a short explanatory paragraph, a poem, or a novel. Reading may be oral or silent. Oral reading may be informal to a group or formal for entertainment purposes. Silent reading may be to secure information or to enjoy. Writing and speaking offer more outlet for creative expression than do reading and listening. Quite frequently, appreciation is discussed in connection with the pleasurable reading of literature—short stories, novels, drama, essays, biography, and poetry.

CREATIVITY AND APPRECIATION IN THE LANGUAGE ARTS

Each teacher should attempt to define what is meant by creative expression in the language arts because language is the primary means of communication and an important source of enjoyment in our society. At the same time teachers should formulate procedures for identifying those students who appear to be able to convey ideas expressively in written and spoken form. These students should be educated to become our teachers, authors, dramatists, and speakers.

What are the characteristics of literary expression, for example, a lyric poem, which make it artistic? Examine eight characteristics of literary art now, and again after you have read a lyric poem:

1. It conveys an idea or expresses a feeling clearly and vividly.
2. It has definite balance.

3. It has definite sequence with no sudden breaks or unrelated movements.

4. It has definite rhythm which is pleasant and apparent in oral reading.

5. Emphasis is given in various lines or stanzas to clarify the idea or to stress the feeling.

6. Choice of words and sounds—assonance, alliteration, and onomatopoeia—lends color and sets a feeling tone.

7. It is compact.

8. It is a unified whole.

Now apply these same characteristics to a short story, a novel, or a Shakespearean play. Which would you eliminate and what others would you add? Theme, plot, and characterizations would be added in all narrative literary forms.

What are the characteristics of the adolescent who is likely to express himself well through setting down his ideas and feelings in a well-executed literary form? The list of characteristics which follows is not intended to be complete. As you read it, rank the items in order of cruciality and add others which you consider important.

1. He possesses much information gained through wide and rich experiences in travel, in community excursions, in reading materials in his home, and in listening to the radio.

2. He is above average in verbal abilities, especially memory, vocabulary, and abstraction.

3. He is conversant with community and broader social issues.

4. He masters English compositional techniques easily.

5. He enjoys reading, likes to write, and persists in these activities when opportunity is made available for doing so in the classroom.

6. He is imaginative.

7. He is expressive, verbally.

8. He is sensitive to beauty in various artistic media and in nature.

9. He perceives the structure in written forms readily.

10. He responds positively to the feelings expressed in lyric poetry, folk songs, drama, etc.

To some extent these attributes may be taught, perhaps the first two less than the others. Also, environmental differences, even at this

date when practically all children are in school to age sixteen, may have caused some students not to advance nearly in line with their abilities. Backgrounds need to be examined prior to applying the ten criteria in identifying the creative student.

Can all high school students be taught to express themselves in written form at a creative level? It is entirely probable that a small portion of students will write creatively; a much larger group will write sufficiently well to communicate their ideas clearly in friendly letters, short descriptions, and the like; a small group will express their ideas at the level of upper elementary school children. From this discussion it should not be inferred that adolescents will not find much enjoyment from conversing with others regardless of how poorly they may write or that they will not read for enjoyment and recreation.

LITERATURE IN THE LANGUAGE ARTS AND OTHER COURSES

Incident, mystery, detective, and romantic short stories and romantic and historical novels are commonly read by high school students. They listen frequently to radio dramatizations. They attend movies many of which are adapted from novels, short stories, and plays. Some attend theatrical productions. Why, then, do so many not learn to appreciate literature in the school? Among the more important reasons are that the teaching of literature frequently does not challenge student interest; the selections required to be read are not appropriate for adolescents; the setting in which the study takes place is not attractive; teachers test and mark on factors unrelated to appreciation, thus destroying the very purpose of the study; and finally, too much question-and-answer recitation of form, theme, plot, characters, the author's style, and the encyclopedia account of the author's life is thrust upon the students. The latter may be analyzed to some extent, but whole-class drill is inappropriate for developing appreciation of literature.

How should literature be taught to encourage appreciation? In the language arts or literature class the library should be the primary source of reading materials—short stories, novels, plays, biography, essays, and poetry. Selections from the anthology or basic text may be

used for a common core of reading required of all students. Such selections should be made carefully through a process of experimentation to identify those which the students find interesting. If, during a semester, few students indicate interest in reading them, the anthology should not be used at all.

From one-fourth to one-half of the class time should be used for free reading; the remainder may be devoted to reading in the anthology. Silent reading should be only one part of the anthology reading. Panel discussions of the material read may be used in analyzing form, plot, theme, characters, and ideas expressed. Sociodrama is especially useful as a technique for helping students understand plot and characters, introject themselves into the feeling and mood of the selection, develop imagination, and appraise the quality of ideas expressed. Recordings, transcriptions, and field trips, where appropriate, should be used generously. These are but a few of the possibilities for making the study of literature rich and for building student preference for reading better-quality literature.

Most classroom teachers should be concerned with helping students to appreciate literature because it makes a contribution to most subject fields; and, more important, reading literature may contribute significantly in securing information and in enjoyment of leisure time. The science teacher may help students to appreciate biography in their study of scientists and to read poetry which has natural phenomena as its theme. The social studies teacher may help students to appreciate the significance of a man's contributions, of events, or of social issues through the reading of novels, biography, short stories, drama, and poetry. The foreign language teacher may encourage students to understand a culture through reading the literature of the culture. Each teacher in any class may help students to write their ideas in clear and forceful terms—a very important aspect in appreciating the written expression of others.

As production of objects in the crafts, home arts, and industrial arts classes may positively contribute to appreciation of color, texture, and form in the visual arts; as playing an instrument, singing, or dancing may contribute to the appreciation of music; so also expressing oneself

in written composition or oral communication may build sensitivity to the quality of ideas, feelings, balance, rhythm, and unity in a literary form.

THREE PROBLEMS IN INSTRUCTION IN THE LANGUAGE ARTS

Three issues related to the language arts program are now examined: (1) Should students with recognized abilities in the language arts be given specialized instruction in classes organized for that purpose? (2) To what extent should the teaching of reading, writing, and speaking be separated from literature? (3) Should language arts be completely integrated with other usually separate subjects? These issues are not fully explored but are presented for your consideration.

If it is sound educational practice to have special courses in art and music as electives for students high in these talents, then students possessing advanced aptitude in the language arts should have opportunity to take courses such as creative writing, dramatics, and journalism. Helping the able students to improve prospects for a fruitful career in writing or dramatics appears judicious. Though it is unattractive according to democratic ideals to place students in sections or in elective courses according to achievement level, scientific investigations generally show that higher performance results. In the smaller schools where it is not feasible to offer special courses or to section, a variety of rich reading materials should be available in the classroom, and every teacher should provide many opportunities for the students to express themselves creatively.

In the junior high school, instruction in reading, writing, speaking, and literature should be combined as one language arts course at each grade level. These courses should continue through the senior high school years with electives being available in various areas of the language arts as the school is able to provide them. Special emphasis may be given to reading, writing, speaking, and literature in various units in the language arts course. To completely divorce the language arts one from the other, as separate subjects in the junior and senior high school program, is to invite sterility and monotony with little opportunity for developing aesthetic-type responses.

In the core class in the junior high school, the attempt is often made to integrate language arts with other subject fields. When activities are organized according to a developmental sequence of problems which are originated by the teacher and students, the teaching of writing, reading, speaking, and listening is a very important part of the total instruction. In a class like this, students write guides for work and conduct and reports of their study in the form of themes, newspaper articles, or radio skits; and they may engage in group work to incorporate the ideas of the whole class in an essay, short story, or poem. Speaking activities include discussing with one another in informal situations, giving individual and group reports, and presenting dramatizations of various kinds. Reading activities include those needed to secure information from textbooks, supplementary references, magazines, and other more general sources. The literature read is related to the problems under investigation. Listening skills are developed in many ways, including sociodrama, interviewing, and paying attention to the teacher's explanations, demonstrations, etc. As suggested previously, instruction in art and music may also be integrated with the language arts in the core class and in many other classes which have usual subject designations.

As students are able to integrate their learning activities, the possibility for making the learning more meaningful increases. Aesthetic behavior, whether it be the writing of a news story by a group of students, the playing of musical instruments and singing, or using pictures and art materials to decorate the bulletin board, follows a developmental sequence. As boys and girls grow from immaturity to maturity, we can teach them to express themselves more artistically, to build aesthetic judgments, and to appreciate more deeply the function of the arts in their daily lives.

To develop aesthetic responses related to any area of the arts in the school life of youth, it is necessary to (1) begin the instruction where they are, (2) provide a physically attractive environment in which the learning occurs, (3) organize learning activities and use of instructional materials in such manner that students are able to find relationships between the arts and their life in the school and community, and

(4) make the learning activities pleasant so that students want to re-create these pleasant experiences in life outside the classroom.

SUMMARY

Creativity and aesthetic appreciation are closely allied. The creative individual—the painter, musician, poet, automobile designer, interior decorator, or ballet dancer—has special physical aptitudes related to his area of expression. He has a keen imagination, persists in his creative efforts, and exhibits a large measure of self-expression. He masters skills in the use of tools and materials quickly, and quite readily perceives the total, unified design of an artistic object or expressive form. The individual who appreciates beautiful things need not be high in any of these characteristics. However, he must be aware of the function of art in his daily life, must be sensitive and discriminating, and must exercise sufficient judgment to identify what is artistic and what is not.

Adolescents vary in the above characteristics. The role of the teacher is to identify those students who have creative talents and help them build their performance abilities and to help all students build preference for better art, music, and literature and appreciate these sources of beauty in their daily living. When all students learn how the arts function in their daily lives, undoubtedly many who have high abilities and go through our schools unidentified will be taught performance skills.

In the visual arts, music, and the language arts, the possibilities for assisting students to create at a level which brings pleasure to them and which makes living in the school, home, and community more worth while are relatively unexplored. In our high school programs we need more coöperation among teachers with various specialities in order that (1) more youth learn to express themselves creatively and to appreciate beauty in their daily living, (2) more effective instructional methods are formulated and carried out, and (3) the role of creativity and appreciation receives the emphasis it deserves in the instructional program. If the arts are integrative forces in our lives, high school students in most schools need more integrative experiences through which to build their talents and to appreciate the arts in the school-community environment.

QUESTIONS AND ACTIVITIES

1. What is the relationship between mass production and distribution of goods and the arts in American life in connection with (a) home decorating, (b) musical performances engaged in and heard, (c) drama engaged in and seen, and (d) literature read?
2. How may the visual arts, music, and literature serve to integrate life of students in the school?
3. Of the seven factors listed in the discussion of creativity and appreciation, which are most important in the development of a musician or dramatist you have known or studied?
4. What led some students you have known to become proficient in one or more artistic skills? Why did others not continue who apparently made excellent beginnings? Why did others not develop any skill?
5. What are the main reasons for having separate courses in the visual arts, music, and the language arts? What are the main reasons for combining separate subjects in each field into general or broad-fields courses?
6. What major difficulties are encountered in a core class in the attempt to include instruction in the visual arts, music, and the language arts? What values may accrue?
7. Should the high school have as major fields for students to pursue (a) fine arts, (b) industrial arts, (c) the visual arts, (d) music, (e) language? If so, why?
8. In a given school there are children of Anglo, Jewish, Negro, and Spanish descent. Organize a resource unit related to the problem of securing good relations among these groups in the school and community. Specifically, list the art objects and materials, music records and songs, literary selections, and films which would be useful in the unit with suggestions as to how they should be used to achieve the desired outcomes.
9. Keep a diary for one week of the visual arts you have enjoyed, the music you have heard and liked, and the literature you have read. A high school or college class may do this. What conclusions do you reach concerning the teaching of aesthetic responses in school and its relation to out-of-school life?
10. Assess the possibilities for incorporating the visual arts, music, and

language arts into regular classroom instruction related to your area of teaching.

REFERENCES

-
- Cross, E. A., and Carney, Elizabeth, *Teaching English in High Schools*, New York, The Macmillan Company, rev. ed., 1950, chaps. 2, 3, 18, 19, 20.
- Dewey, John, et al., *Art and Education*, Merion, Penna., The Barnes Foundation Press, 1947.
- Dykema, Peter W., and Gehrken, Karl W., *The Teaching and Administration of High School Music*, Boston, C. C. Birchard and Company, 1941, chaps. 2, 27, 32.
- Meier, Norman C., *Art in Human Affairs: An Introduction to the Psychology of Art*, New York, McGraw-Hill Book Company, 1942, chaps. 2, 4.
- Mursell, James L., *Music and the Classroom Teacher*, New York, Silver Burdett Company, 1951.
- National Society for the Study of Education, *Art in American Life and Education, Fortieth Yearbook*, Bloomington, Public School Publishing Company, 1941.
- National Society for the Study of Education, *Learning and Instruction, Forty-Ninth Yearbook*, Chicago, University of Chicago Press, 1950, Part I, chap. 7.
- Progressive Education Association, *Creative Expression: the Development of Children in Art, Music, Literature, and Dramatics*, Milwaukee, E. M. Hale and Company, 1939.
- Progressive Education Association, *The Visual Arts in General Education*, New York, Appleton-Century-Crofts, Inc., 1940.
- Rugg, Harold, *Foundations for American Education*, Yonkers, World Book Company, 1947, chaps. 13, 14.
- Seashore, Carl E., *In Search of Beauty in Music*, New York, The Ronald Press Company, 1947.
- Stanford University Education Faculty, *The Challenge of Education: An Introduction to Education*, New York, McGraw-Hill Book Company, 1937, chaps. 10, 11, 13.
- Struck, Ferdinand T., *Creative Teaching: Industrial Arts and Vocational Education*, New York, John Wiley and Sons, Inc., 1938.

Building Morale and Maintaining Classroom Discipline

Discipline has many different meanings for school people. For some, it means absolute quiet in the classroom; for others it means that all students follow the teachers' directions without question or hesitation. To discipline a student may mean to punish, physically or verbally, or to take away liberty and freedom; it may also mean to force the student to engage in drill, usually of an unpleasant type, in order to build desired attitudes or behavior. The first two uses of the term imply conditions relating to the group as a classroom entity; the latter pertain to the individual.

None of the above uses of the term is adequate; each is too narrow to indicate the scope of the problem. The purposes of classroom discipline are twofold: first, to help each student grow from dependence on adults for direction and control to self-direction and self-discipline based upon an understanding and practice of the ideals of democratic citizenship; and second, to set up in the classroom an orderly work situation so that learning activities proceed smoothly. Thus, discipline measures constitute all the positive, preventive, and remedial procedures carried out to achieve the purposes and are an integral part of the whole teaching process.

In the discussion which follows, the mental hygiene viewpoint toward discipline is first examined to discover constructive approaches for achieving these purposes; second, social climates within the classroom group are analyzed to show how teacher leadership in managing

social relationships and learning activities affects growth toward self-direction and an effective work situation; third, specific problems involving use of punishment are investigated; and fourth, basic elements in a remedial program are outlined.

THE MENTAL HYGIENE VIEWPOINT TOWARD DISCIPLINE

The mental hygiene viewpoint related to the purposes of discipline is this: First, classroom methods should be directed toward producing self-disciplined, well-adjusted individuals. Teaching directed toward producing well-balanced personalities is as important as that directed toward improving subject understandings and skills. Second, methods should be directed toward building high morale because it is requisite for the prevention of maladjustment expressed in the classroom in some form of conduct injurious to the individual or to the group. Third, aggressive and withdrawal behavior, destructive to individual or group progress in a given classroom, indicates that the situation does not satisfy student needs or that antisocial attitudes and behaviors are brought into the classroom from outside sources. In any case, the antisocial behaviors expressed are to be investigated to discover causes rather than to be condemned forthright. Punishment should be carried out only when the individual's behavior seriously impedes progress of the group or greatly lowers group morale.

The eight guides which follow outline positive approaches to achieving the foregoing purposes of discipline. The mental hygienist is primarily concerned with building mental health and thereby preventing maladjustment.

RECOGNIZE THE IMPORTANCE OF DEVELOPMENTAL TASKS TO YOUTH

In Chapter 2, seven major developmental tasks of youth were described, as was the nature of adjustment to these tasks. The adolescent reflects his problems of reaching maturity in his classroom behavior. The classroom situation, because it is a controlled one, should help students become well adjusted and learn socially approved ways for meeting their problems. It is recognized that any adolescent who is seriously disturbed about a developmental task will not learn efficiently

and that his conduct will be erratic until he finds solution to his problem.

Three developmental tasks which often lead to classroom disturbances are related to the adolescent's need to control emotional expression, to make satisfactory adjustments to age mates, and to build new and satisfying relationships with adults.

Discipline procedures designed to help students make good adjustments to age mates utilize the adolescent's need for attention and approval. Opportunity is provided for students to discuss problems and lessons with one another, to work together, to set up standards of conduct for working together, and to evaluate progress in following individual and group standards. In this kind of classroom situation the teacher serves as the leader to assure that the urge for attention and approval is accommodated in socially approved ways toward useful ends; thus it becomes a positive motive for producing a better learning situation. The teacher who helps adolescents gain attention and approval by doing work well in the classroom is capitalizing on this urge. Not to allow the adolescent to get attention from classmates and not to direct his activities toward useful ends is to invite a variety of behaviors not conducive to a good learning situation. The extreme form of antisocial behavior found in delinquent gangs may begin in classrooms. In these gangs adolescents satisfy their need for attention and approval of age mates; their conduct, however, is injurious to society and to themselves because the means are destructive rather than constructive.

The need for attention and approval from the teacher is perhaps not so strong; however, many adolescents seek approval of the teacher. The adolescent's feelings toward adults are often ambivalent; that is, at times he wants to be completely independent from adult control yet at the same time feels very insecure unless he knows that the parent or teacher approves of his plans or conduct. In high school classrooms we have adolescents in various stages of this development; some need a great deal of approval from the teacher; others are relatively mature. Constructive disciplinary procedures take into account the differences in developmental status, give the students increasing freedom of decision as they are ready for it, and help them in making choices by uti-

lizing their need for adult approval. The teacher who makes all the rules and attempts to obtain uniform subservience does not help students grow in self-control.

Controlling emotional expression is a developmental task which often presents problems for the student. Mild, pleasant emotions encourage learning; intense and unpleasant emotions disrupt a good learning atmosphere in two ways: First, the individual's control of mental processes decreases; and second, as he expresses his feelings, he interferes with the learning of others. Fear, guilt, anger, worry, and jealousy are disruptive emotions; they lower work output and have a depressing effect on the individual. In mild cases the depressing effect is temporary; in severe cases it becomes relatively permanent. Also, feelings of anxiety and worry are readily transferred from one individual to another in closely knit groups.

Adolescents, meeting developmental tasks, frequently find themselves in situations where disruptive emotions are involved. Teachers need to be familiar with the kind of situations which produce disruptive emotions, recognize symptoms of emotional stress, and avoid crises in their classrooms as preventive measures. One who would help adolescents mature emotionally organizes constructive procedures whereby they learn the nature of emotions, learn how to analyze situations objectively, recognize socially approved methods for relieving emotional tensions, build skills in meeting problem situations, and find out how to eliminate immature patterns of emotional response. In many classrooms, these kinds of learnings are largely incidental; nevertheless the teacher might well work with the student who is highly immature or infantile in his emotional expression because this student needs to grow emotionally and will be a constant source of irritation for the group until he becomes more mature.

We must recognize the importance of developmental tasks to youth and expect some immature behavior to be exhibited in the classroom as part of the developmental process. Teacher leadership should not be laissez-faire; rather it should be positive and constructive to help students find adequate solutions. We may look at the problem in this way: The nature of developmental tasks suggests that the student wants to find a solution, and this desire provides the motive for his activity.

The nature of need satisfaction suggests that some form of adjustment, adequate or inadequate, to the developmental task will be found. The two purposes of discipline given above suggest that the teacher should recognize the developmental tasks and accommodate the underlying motives to energize learning activities which help the individual grow in self-direction and self-discipline.

PROVIDE SECURITY FOR STUDENTS

Here is a description of a classroom characterized by security. The students and teacher are busy at work doing things important for themselves and for the group. The students are poised and self-confident. They trust their classmates and the teacher, who in turn trusts them. They are friendly and considerate; they show genuine interest in the problems and activities of one another. They are proud of their community, their school, their classmates, and their teacher. Each student feels that he is helped because the teacher wants to help him, not because the teacher has an impersonal duty to perform. Students respect the teacher because they are treated as individuals worthy of respect and consideration.

Feelings of insecurity lead to unpredictable conduct and to personal maladjustment. Some of the conditions which lead to student insecurity in the classroom are (1) threat of failure because the standards are above the student's abilities, (2) rejection by classmates, (3) rejection by the teacher, (4) ridicule from teacher or classmates, (5) teacher inconsistency in personal relationships with students, and (6) teacher inconsistency in setting up the learning situation. The individual student who is threatened with failure because standards are above his abilities may cheat, become boisterous and rowdy, attack classmates, isolate himself from classmates, withdraw from learning activities, become truant, or quit school. One cannot predict exactly what the insecure student will do unless he knows the behavior patterns of the individual. It can be predicted, however, that when students feel insecure in the classroom disruptive incidents increase, meaningful learning decreases, and growth toward self-direction and self-control is stunted.

Degree of security varies widely with different classrooms. In some, the secure situation described previously exists; in others, chaotic condi-

tions are found. Frequently, both classroom situations are found in the same school. When students are observed in different classes one discovers that relatively stable students in one situation are highly insecure in another. Also, groups of students vary in social controls and emotional maturity. A teacher may form a stable, secure situation with a controlled, mature group but not with another group. To produce a high degree of security the teacher must (1) be emotionally stable and consistent in relationships with students, (2) accept each student regardless of present ability to meet certain academic standards, (3) organize the learning situation so that each student finds some area for successful participation in the academic work, (4) manage the social relationships in the classroom so that the students are accepted by one another, and (5) help each student to identify himself with a group goal or the group spirit.

KEEP STUDENTS ENGAGED IN INTERESTING ACTIVITIES

The emotionally healthy person uses his energies in carrying out activities which are worth while to him. Activities become interesting as he sees a relationship between them and a goal. When he has a goal and is prevented from reaching it or feels that the methods outlined by the teacher are inappropriate, he becomes frustrated. The student who is frustrated in achieving his goals becomes belligerent, daydreams, or exhibits other behavior not conducive to a good working situation. The student who has no goal related to classroom learning does not work; he finds other things to do—reading comic books, teasing classmates, heckling the teacher, or at best sitting quietly.

The first step in utilizing interest is to discover that which currently exists. Usually such discovery leads to the conclusion that interests are varied and that many adolescents are extremely limited in scope of interests. A major purpose of teaching is to help students broaden interests. An individual, prior to reading a novel, is not sure whether it interests him or not; but the author has written the first chapter to arouse interest in the reader to complete it. With adequate guidance in the beginning, a student who has an interest in building model airplanes may become highly interested in studying physics or mathematics to

design planes. The same is true in many areas of classroom instruction. Two major problems are to organize activities which help students broaden their interests and to utilize methods and materials whereby present interests are directed toward achieving realistic goals.

Generally, students will work toward goals which are immediate. Many students, particularly during junior high school years, are incapable of formulating goals far into the future because they have not yet had enough experience to appraise their own abilities and limitations in relation to performance deferred for a year or more into the future. We expect a large number of students in the seventh-grade band to lose interest when the goal set for them is to make the marching band in senior high school; however, we expect that most of them will work hard and behave well to present a Christmas recital near the end of the first semester. Tenth-grade students will show more interest and effort in perfecting speech to present a play during the semester than during the eleventh grade. Many students quite early project performance into the future; very frequently, however, this projection is more romantic and idealistic in nature than realistic and does not serve to guide conduct in daily classroom activities. Short-term goals are relatively much more effective in arousing interest and keeping work output at a high level. The individual who directs his energies toward a goal acceptable for himself and the teacher rarely becomes a discipline problem.

ESTABLISH A ZEST FOR LEARNING

Everyone who has observed small children closely marvels at their exploratory behavior. Preschool children ask questions concerning all phases of their environment: What is the moon? What makes lightning? Where do babies come from? Where is the airplane going? Why does the baby cry? While children are learning vocabulary, they use the same word over and over from sheer enjoyment of manipulating the vocal mechanism. The small child is curious about number relationships, especially when purchasing desired objects. Most mothers spend a considerable amount of time trying to discover where curiosity has led the young child in his outdoor play. The nursery school and

kindergarten erect fences around playgrounds to keep this curiosity within supervisory limits. With few exceptions, young children are curious, exploratory, and eager to learn.

For many children, this zest is somehow blunted during elementary and secondary school years by restrictions arising in the home, the neighborhood, and the school. Beginning in the first grade the urge for activity which leads to new discovery is thwarted by the pressure of conforming to a confining situation—the classroom. Answers which the child wants now to solve an important problem are deferred because a problem which an adult wants solved takes precedence. Then, too, teachers often feel it is their job to give the answer rather than to help the pupil find the answer. The curriculum of the elementary school, suited perhaps to the middle group of pupils, becomes more important than the pupils' needs in some classrooms. All pupils drill on the same spelling words, reading exercises, and arithmetic facts—the bright ones until they are completely bored and the slower until they are exhausted. Subjects in the junior high school are frequently taught as if all students needed the same dosage of identical prescriptions. Eventually, the student no longer finds a challenge in the classroom learning situation; his previous eager searching for solutions becomes passive tolerance or even open resistance.

We have made frequent references to the need for relating classroom learning experiences to out-of-school life and for helping the learner see practical applications. This in no way denies that students should be helped to feel the thrill of discovery for its own sake. Typing for five minutes without error, playing a melody on the piano for the first time, making a five-minute talk to classmates, building a desk, discovering a method for solving a problem using a letter for an unknown quantity, discovering how to purify water—all of these may be thrilling explorations.

To what extent all secondary classrooms may be workshops where students feel the thrill of making important discoveries is not known. In some classes the situation does prevail. In those classes where students are frustrated in carrying out identical assignments, in conforming to overly restrictive rules of conduct, or in following monotonous work methods many discipline problems arise. Monotonous use of a

teaching method which encourages passivity tends to destroy zest for learning. Adapting learning experiences to student needs, utilizing a variety of instructional materials, and encouraging students to find solutions build zest for learning.

SET REASONABLE LEVELS OF ACHIEVEMENT

Some teachers set levels of achievement beyond reasonable limits. The achievement level is always too high when the teacher sets perfection as the only one for which students strive. The student capable of doing slightly-above-average work in geometry is encouraged to strive for perfection—to make a perfect score on timed tests. He is led to believe that he can and should do it and feels guilty for not having done so. Feelings of guilt which arise from achieving lower than ideals are common among better-than-average students. Teachers and parents who attempt to push adolescents beyond their abilities by holding perfection as the only goal create undue emotional hazards to normal development.

The perfectionist is one who is constantly dissatisfied with himself and unhappy because he does not achieve his goal. He eventually comes to fear trying anything new because of the possibility of making a mistake; he is impatient with others who do not accomplish or strive as does he; and in many cases he develops definite feelings of superiority in relation to others but inferiority in relation to achieving his own goals. Examples of perfectionism are often found in our graduate schools. Many graduate students will not take a class in which there is a possibility of receiving a *C*, however valuable the class is to their career plans. Unless at the top of the class, they are unhappy.

Perfectionism is often illustrated in admonitions to high school students: "Do not be satisfied until your work is perfect"; "Work to get to the top"; "Solve the ten problems correctly in five minutes"; "Everyone should make one hundred percent on this test." Generally, these are unrealistic demands by the very nature of the distribution of abilities related to most classroom learning.

At the opposite extreme, setting standards too low, students become complacent without working toward higher achievement and improvement of work or study methods. When students are not challenged

sufficiently, they become satisfied with doing just enough to get by or with being near the top when they can achieve such position without much effort.

To help students set reasonable levels of achievement, the teacher must understand each individual's abilities related to the work at hand, help the student set realistic goals, and help him achieve progress toward the goals. Every teacher should anticipate that students come into the classroom relatively unequal in abilities, and that when equal amounts of time are used in the classroom to develop understandings and skills, difference in achievement becomes greater rather than smaller. Each student needs standards in line with his ability. When he becomes frustrated because he cannot reach a teacher standard, he may cheat, lie, become unruly, or give up. When the standard set is too low, the individual becomes complacent; and time which should be used for developing better performance is spent in idling, harassing the teacher and classmates, or other unproductive effort which tends to disrupt the classroom work situation.

USE TESTS AS AIDS TO LEARNING

Many teachers would do well to discover the number of times they tell students to complete an assignment because a test is in the offing. Assuredly, students should know the source from which test items will be drawn and when tests will be administered; but they should study because studying has value other than to pass tests. It is well established that facts and information learned for the purpose of passing tests are forgotten quickly and that, while tests as disciplinary measures may produce better conduct in a poorly managed learning situation, student adjustment problems increase.

Tests may serve as valuable aids to learning when students know that the tests are used as a means for discovering the extent to which correct responses have been established, for measuring progress, and for overcoming difficulties. Usually a teacher-led discussion of a test after it has been scored serves these purposes. Discovering where one stands in relation to his classmates is also useful when interpreted properly. The student should realize that he may have done poorly because he did not study or has developed a work method which inter-

feres with his progress. The student who has worked hard and done poorly in relation to others but well in relation to his abilities and readiness should not be ridiculed or made to feel insecure. Until we can get curriculum offerings sufficiently broad to meet the various degrees and kinds of abilities found among school-age youth, students who do their best should not experience failure repeatedly, be eliminated from high school, or be encouraged to cheat or use other devious methods for passing tests.

Any teacher may use tests to arouse fear, jealousy, and antagonism among students. It is easy to make a difficult test and then set a high standard for passing so that few students reach the standard. A teacher surely will make students become fearful of tests and antagonistic by writing unfavorable notes to parents, criticizing the class as a whole, or criticizing individual members before the class for having done poorly. Taking away privileges and assigning extra duties serve the same end.

Students frequently fear tests because they do not do so well as parents hope, because they want to excel a sibling or classmate, or because they want to win some sort of award or recognition based on competitive test scores. Some adults have learned to fear all test situations largely because of how these were handled in school. Ways in which testing becomes constructive are as follows: (1) Make sure that the teacher and student purposes of the tests are clearly understood; (2) give tests frequently so that each does not become so important; (3) give tests only as scheduled; (4) use tests and other devices as a method for students to measure progress; (5) help students recognize factors which produce differential test scores; (6) use the test results to understand students better and to organize more effective learning experiences.

MARK ON A VARIETY OF GROWTH FACTORS

When the goals of secondary education are examined closely, it becomes apparent that high school classes should help students build understandings, skills, and attitudes related to many aspects of growth including mental, physical, social, emotional, and aesthetic. Further, each individual is to grow according to his potential and should profit

from going to high school because we are a democratic people and want to help each youth become a useful member of society. In marking students, then, we should mark on the basis of individual growth related to a number of different factors. This statement does not mean that all marking on a comparative basis should be forsaken. We need marks to show comparisons, but comparative marks should not be employed exclusively.

How can a marking system be devised which takes into account individual growth in relation to abilities and progress in relation to the group? First, decide the areas toward which the particular class contributes. A marking system might be organized in a core class using broad categories such as work and study methods, social relationships with classmates and teacher, emotional control and maturity, aesthetic development, and subject understandings and skills. No more categories should be included than the teacher can reliably appraise. Second, some system for marking, understood by teacher and students, should be outlined. This might take the form of letter grades; descriptive comments like excellent, satisfactory, needs special help; symbols such as 5, 4, 3, 2, 1; or even percentage. Each of these systems is used advantageously in some schools; the important feature is that the marks are clearly understood by teachers, students, and parents. A final step is to devise a system for determining individual growth toward the objectives, taking into account the abilities and aptitudes of each student. Marking on a broad basis like this instead of on comparative achievement solely tends to help students find areas in which they are successful and encourages better working conditions in the classroom because the student is challenged to make improvement in a number of important growth areas.

Students should know how they compare with others and may be marked on such comparison when other criteria such as those outlined above are also employed. Each student may be marked on subject understandings and skills in relation to his own growth and also in relation to classmates. In reporting to parents and for permanent school records, these two marks need to be separated rather than combined in one individual mark for the semester or year. One student with low ability in general science works hard but at the end of the semester

has lower achievement than did another student at the beginning who also worked hard and improved rapidly. These two students should not receive the same comparative mark. It is unfair to the students, to their parents, and to others who make judgments based on marks to give both of them the same mark.

The big problem in marking related to discipline is to devise a system that is fair to all students in terms of the ideals of democratic citizenship and in relation to the individual's appraisal of himself. When students are marked only on comparative achievement in subject understandings and skills, there is a tendency for the best students to loaf a great deal, for the average to become individualistic and antagonistic toward one another, and for students with lower achievement or development to cease trying or to quit school. These conditions produce aggressive and withdrawal types of antisocial behavior. When high marks become the goal of education and low marks become associated with low prestige and status, the marking system itself needs to be reexamined because it is not contributing to growth in self-direction or to an effective work situation.

TAKE CARE OF DISRUPTIVE SITUATIONS AS THEY ARISE

Disruptive classroom behavior lowers morale and lessens work output. Therefore, it is important to deal with disruptive incidents as they occur so that they do not become serious. Boisterous and sustained scuffling, mutilating equipment and supplies, and using profane language are types of conduct which need to be curbed for the good of the group.

There is no one prescription to be utilized for meeting the different situations. As adolescents differ in some respects, so also do situations which lead to various kinds of conduct. The following suggestions are pertinent as general guides in relation to the purposes of discipline: (1) Make sure that the students get to work as soon as they come into the classroom; (2) know each student by name so that you can call on anyone who may be starting a problem, thus diverting his attention from the problem to you; (3) note the conduct of individuals very carefully to locate students who appear most immature in self-control and direction; (4) avoid display of emotion on your part; (5) when

necessary, exercise tight control over student conduct in early class meetings; (6) when necessary, remove a student from the classroom for serious forms of misconduct according to prearranged procedures with the principal or counselor (if in doubt as to your ability to induce a student to leave, call in the principal); (7) try to work out the problem with the individual student in your classroom; and (8) use punishments in the classroom when necessary. Punishments may be necessary at times to divert attention and to repress undesirable conduct. Problems related to use of punishment are outlined in a later section of this chapter.

In many instances, disruptive situations will not arise or become serious if the teacher takes time early in the semester to help the class formulate rules of conduct and methods for evaluating progress in reaching standards. In Chapter 7, one way to do this was discussed as an initiatory activity. Briefly review the procedure: First, get and hold the attention of all students; second, elicit from them the rules which they think they should follow; third, make additional suggestions which you think are necessary; fourth, have each student make a check list for evaluating his conduct; and fifth, use a few minutes toward the end of the class period for discussion of these group standards of conduct. Carry on this procedure until the group becomes self-governing; usually the time required for this kind of activity pays high dividends in increased work output, higher morale, and fewer crises.

In summary, the mental hygiene viewpoint related to the purposes of classroom discipline emphasizes the need for taking positive, constructive measures which help students grow in self-control and which build individual and group morale. The classroom characterized by student responsibility and high morale always offers a good working situation and produces a high measure of learning.

CLASSROOM CLIMATE AND DISCIPLINE

The interpersonal relationships within the group and the management of such relationships by the teacher are important factors in classroom morale. The feelings of students and expression of those feelings toward one another, toward learning activities and work procedures, toward the school and community, and toward the teacher, and the feel-

ing of the teacher toward the students and the classroom situation—all of these forces operating simultaneously produce the social climate of the classroom. The social climate vitally affects conduct and work activities. Social climates may be grouped in four categories: (1) anarchic, (2) repressed, (3) competitive, and (4) coöperative.

ANARCHIC CLIMATES

An anarchic climate is one in which there is great confusion and disorder—one in which standards for conduct and work activities have not been established. Frequently, this kind of climate results when the teacher overestimates the maturity of the group and suddenly puts the students completely on their own. It also may come about because the teacher has a poor sense of educational values or does not know how to guide the conduct of adolescents. In any event, because there are no accepted group standards of control and no feeling of unity among the members, conduct is erratic, undisciplined, and disruptive.

The teacher who overestimates the maturity level of adolescents and very suddenly puts them on their own for deciding work activities and control of conduct fails to recognize that growth from dependence to independence is a gradual process and needs careful direction. In a previous discussion it was pointed out that *laissez-faire* leadership did not give security to students or establish a feeling of unity and accord among them. *Laissez-faire* leadership produced low work output, much aimless activity, aggressive conduct, and frequent withdrawal from work activities.

The teacher with a poor sense of educational values allows students to play cards instead of working on learning activities, to ridicule one another, to express prejudices openly and maliciously, to settle differences with fists, and the like. These kinds of behavior, encouraged or condoned by a teacher, lead to much confusion among class members and to disunity.

REPPRESSED CLIMATES

A repressed climate is characterized by absence of student initiative and participation in planning work or setting goals. In this climate students do not interact with one another while in the classroom.

They do not talk together, work together, or move about. They sit quietly and work individually according to leader direction and rules. To bring about this climate, the teacher remains aloof from students and confines discussion to that between student and teacher. Repressed climates range from apathetic to covertly rebellious.

An apathetic repressed group is one in which the members are thoroughly dominated by the leader. They have lost initiative and no longer desire to assume responsibility for locating problems or making progress in solution of them. We find examples of this climate outside the classroom in caste systems—social organizations where individuals have accepted an inferior status and do nothing about improving it. The same climate is found in homes where a father rules with an iron hand and so thoroughly subjugates other members that they become apathetic. Some prisons and schools for delinquents are operated in the same fashion. This climate can be brought about in the classroom only when home and community assist in the process of repression. Children coming from homes where they have learned that it is better to submit than to resist may be perfectly willing to succumb to a dominating classroom leader.

A covertly rebellious group is one in which the leader dominates and constantly suppresses surface aggression against the leader. The group members, however, are united in a feeling of resentment against the leader and, outside the controlled situation, devise methods for resistance. When a unified feeling exists against the leader, members utilize various methods for frustrating him. They refuse to work to capacity, to carry out leader suggestions promptly; they discover ways for irritating the leader. In the classroom, loud blowing of nose, faked crying, loud coughing and clearing of throat, "accidental" dropping of books, frequent breaking of pencils, and the like indicate a repressed rebellious attitude.

Repressed climates lead to widespread maladjustment because satisfaction of the need for activity, attention, and approval is denied. Any repressed group, whether in the home, the school, or the community, fails to achieve its potential in productive work output because initiative is lost, or it is directed against the repressing leader.

COMPETITIVE CLIMATES

A competitive climate is one in which group members direct their energies to becoming superior to others. Because our adult society is to some extent competitive, many adolescents have learned to respond to competitive motivation. However, it is imperative to recognize that our adult society is to some extent coöperative, that the more successful adult competitors are those who have had frequent successes and relatively few failures, and that, as a society, we are civilized and are committed not to sacrifice children or to destroy less effective adults for the sake of achieving and maintaining superiority feelings. It is false to assume that, because the adult society is somewhat competitive, adolescents should learn to experience failure based on competitive standards set up in school. On the contrary, it is a well-established fact that children need success in school to meet competitive situations outside school with a fair degree of emotional stability. Delinquents, criminals, and psychotics frequently have histories of many school failures and few successes. Competitive climates may be classified as friendly, hostile, and punitive.

Friendly Competitive. Competition in which rules have been established and are followed may be friendly and conducive to higher morale among group members. Attaining these results depends largely upon the rules which are followed and the goals of the competition. The group leader or leaders are responsible for both these factors. In high-school wrestling definite rules have been established and equality for competition has been provided for by having competition of fairly equal weights. The rules eliminate threat of serious physical injury, and a referee decides when violations are incurred. Basketball regulations within a state also make provisions for competition among schools of relatively equal enrollment. Frequently, competitive athletic events provide that losers participate by engaging with other losers. When the goal is to be topmost and feelings of inferiority result from not reaching it or when the desire to win becomes stronger than willingness to abide by the rules, the friendly feeling is lost.

Competition in the classroom among individuals or among groups

may be friendly and stimulate work activity. These provisions must be operative: (1) Competition should be for students who are relatively equal; (2) rules should be understood and followed; (3) the goal should be a higher level of achievement or better work method rather than a material or symbolic reward; (4) the goal should not be of such magnitude that the students evade rules to reach it; (5) losing should not lead to feelings of inferiority; and (6) losing should not eliminate the desire for further participation.

Hostile Competitive. When members of a compact group compete with one another for material rewards, such as tickets to a movie, for symbolic rewards, such as marks, or for favors and approval from the leader, hostility develops. In reward-directed competition of these types, where all the group members actively participate and where relatively few obtain the reward, intense rivalry inevitably occurs. Work output is expected to fall off for the whole group unless rewards are progressively increased. Work output of the losers inevitably lessens once they discover that they never win.

Hostility manifests itself in various ways. Here are some general characteristics of a hostile climate: First, friendly relationships decrease. It becomes increasingly difficult for Mary to be considerate and interested in the problems of Esther, who is doing her utmost to win the honor of class valedictorian, which Mary also wants. Second, aggressiveness increases. Jim, who wants the first chair in the orchestra, verbally attacks his competitor, Bill, and encourages Sally to date Bill so that he will miss practice or be late for it. Bill may become more direct and hide Jim's music or instrument. Third, withdrawal conduct increases. Frequently the extremely hostile individual hides his feelings in a shell of isolation. He is not satisfied unless he wins, so he withdraws from normal social relationships to utilize time and energy to beat others. Because he feels that others are out to beat him, he distrusts their motives, thus creating an unsurmountable barrier to normal outgoing relationships.

Punitive Competitive. In some competitive situations the losers are punished. This practice is extremely vicious when relatively unequal individuals are put into the same kind of competition and when the losers become scapegoats for the near winners. In the punitive competi-

tive group the leader frequently carries out the punishment; in some situations the leader arranges the climate so that the winners punish the losers. In this climate, hostility among members is comparatively unrestrained; aggression is openly expressed and encouraged.

To some extent, the teacher who fails students who have done their best in a required class sets up a punitive climate. When students are marked according to a predetermined system—10 percent *A*'s, 23 percent *B*'s, 34 percent *C*'s, 23 percent *D*'s, and 10 percent *F*'s—those who do their best and yet receive *F*'s are being punished, for they must repeat the class, substitute some other class, or not be graduated. Equally important, each student who wants to receive a mark higher than the one he obtains may feel that he is being punished for not having achieved well enough. The student desiring an *A* but receiving a *B* may be in this group, especially if he needs the *A* to win a coveted award.

Members of groups within the classroom may punish other members. The teacher in the French class organizes the thirty students into five teams to engage in a vocabulary contest with the first-place team to receive an *A* or other reward, the second-place team *B*, and so on, with the last-place team to receive an *F*, extra work, or loss of privilege. In setting up the groups, the teacher first picks out the five top students and instructs them to choose, in rotation, five other members of their teams. Then the French word is given by the teacher; each student writes the English equivalent. At the end, team scores are computed on the basis of total number correct by all members. In this situation the better students on the losing teams will undoubtedly punish the slower for having caused them to lose. The punishment will take the form of trying to get the slower student off the team, finding fault with him, snubbing him outside class, making him feel humiliated or inadequate, or other devastating action.

These illustrations show how the handling of achievement may serve to produce a punitive competitive climate. The teacher as the classroom leader may consciously or inadvertently produce the same kind of climate in handling standards of conduct, as when students are encouraged to ostracize others who have had little or no opportunity for learning the particular code of conduct which the teacher wants. Here again

rewards for living up to codes of conduct are put on a competitive basis for group members who are unequal in opportunity to achieve them. The teacher praises a particular kind of conduct, bestows favors on the individuals who conform, and punishes those who do not or urges classmates to do so. This sort of thing is especially vicious in those classes where students are punished for behavior in school which is approved in the home.

COÖPERATIVE CLIMATES

There is a basic difference in the motives underlying competition and coöperation. The motive which directs competitive action is twofold: to make oneself a better competitor for personal gain. The motive underlying coöperative is also twofold: to improve oneself to make a significant contribution to the group. The extent of personal achievement in the two climates may not vary significantly, but feelings among members of the groups do. In the best-managed competitive groups, friendliness may exist; in poorly managed groups hostility and overt aggression occur. When members of the group are motivated to improve self for the group's advancement, there is no need for hostility or aggression, and besides being friendly the members are encouraged to help one another.

To establish a coöperative climate among individuals who have already been strongly conditioned in competition is rather difficult because the winners are often unwilling to give up personal gain for group progress; and, having been accustomed to receiving rewards or to experiencing feelings of superiority, they do not accept group goals as incentives for effort. The attitude "What's in it for me?" may be as difficult to overcome as any form of prejudice. Also, students accustomed to a middle or low position on the competitive ladder may not work toward a group goal because they feel inadequate in their relationships with one another.

Usually students work together better (1) when the groups are small, (2) when the members have similar interests and backgrounds, (3) when the members are friendly toward one another at the time the groups are first formed, (4) when the goal for which they work

is clearly understood, (5) when responsibility for leadership in the group is clearly established, and (6) when each individual knows his responsibilities. In first planning to divide a class of thirty students into five groups, each group to contribute something to a whole-class goal, the teacher should carefully take into account all these factors. With relatively immature students or those already strongly conditioned to compete, it may be necessary for the teacher to specify group membership so that those who are friendly and interested in similar work activities get into the same groups, to appoint the leader for each group and clearly outline leaders' responsibilities to the whole class, to outline work activities for each group, and to help each group subdivide responsibilities among members. While the ultimate goal is to get students to assume responsibility for developing and maintaining effective relationships among one another, the teacher must be careful to lessen control gradually and to maintain close supervision of both group and individual work. As mentioned previously, freedom given suddenly leads to chaotic conditions.

In conclusion, group climate is closely related to the purposes of discipline. The teacher, being the constituted leader of the classroom group, largely controls the climate which exists. The particular climate which one chooses to establish needs to be based on careful analysis of the situation and the purposes one hopes to achieve.

PUNISHMENT AND CLASSROOM MORALE

The disadvantages of using punishments as incentives to learning and as deterrents to undesirable conduct were examined in Chapter 3. Using threat of punishment was found less efficient than using reward because punishment requires more policing, leads to more unpredictable results, and produces more undesirable personality conflicts, such as aggression and withdrawal. The need for using punishment should decrease as the teacher becomes more familiar with a group and establishes high morale and an effective working situation in the classroom.

Punishment to divert attention from antisocial conduct and to prevent one individual from interfering with the progress of the group

may be the most constructive procedure a teacher can use in special cases. There are situations in which punishing an individual is necessary to maintain high morale within the group.

Problems involving the use of punishment are located in the areas of (1) criteria for deciding whether to punish, (2) time of punishment, (3) form of punishment, and (4) severity of punishment.

CRITERIA FOR PUNISHMENT

One may decide whether to punish by answering first, "Will punishing help the individual grow in self-discipline and self-control?" and second, "Will punishing contribute to a more effective working situation for the group?" Frequently, both of these questions cannot be answered positively, and one decides to punish an individual for the good of the group. If time were available to investigate the causes of the misconduct, punishment might not be necessary. Serious misconduct often appears suddenly and action has to be taken at that time to prevent a situation from getting out of control or to prevent disruption of the group's activities.

Punishment may be used as an effective means for diverting attention or activity from an undesirable end. The student who is chasing another in a crowded corridor may be brought up sharply with a teacher command to stop and an order for both students to go into the classroom. An individual in the woodwork shop may maliciously use a saw on metal to produce a grating sound which causes other students to quit work. In the crafts class, a student may go from one student to another interfering with their work and accomplishing nothing constructive himself. The teacher's asking these students to desist and giving them some work to perform, such as cleaning up the room, may serve to divert their attention.

The following criteria may be useful in deciding whether to punish: First, how serious is the misconduct? Generally, cursing, using vulgar language, destroying property, fighting, and the like need to be curbed as they appear. Punishing the individual immediately may be the most constructive solution at a given time for the good of the group. Second, for what length of time has less serious misconduct persisted? If an individual persists in less serious but disruptive conduct and fails to

respond to group stimulation and teacher interest, punishment may be necessary until a solution is effected. Third, how seriously does the individual's conduct disturb progress in learning activities? When the individual's actions do not greatly interfere with conduct and activity of the group, it is better not to punish immediately but to investigate causes and try to work out a solution.

TIME OF PUNISHMENT

According to one theory, punishment should come at the time the misbehavior occurs. According to a second theory, the misbehavior should be stopped but the punishment itself should come at some later time. These are quite contradictory; therefore their application will be illustrated in one situation.

John, an eighth-grader, comes into the classroom and in a clear voice uses profane language. Should he be punished then or later? According to the first theory, the punishment should come immediately so that its unpleasantness is closely associated in time with the misconduct. This theory assumes that punishment conditions John not to curse again because he associates the unpleasant punishment with using profane language. According to the second theory, John should be informed that he has committed a serious offense and will be punished later. The teacher makes provision to see him at some later time and punishment is then decided.

Suppose that in both cases the form of punishment had been this: The teacher asks John to stand before the class and then asks his classmates to state their opinions of an eighth-grader who uses profane language; this discussion is followed by having John sit by himself for the rest of the class period. According to the first theory, John would have done this immediately; according to the second theory, he would have done it some time later, perhaps the next day. Some teachers might not have punished John at all and others would have used a different form of punishment. Assuming, however, that these were the procedures followed, which of the two is more effective? The answer is not definite.

In using corporal punishment or sharp disapproval with smaller children in the home, authorities generally agree that immediate punish-

ment is better than delayed. Also, delaying punishment for long periods of time in the form of unfavorable comments on report cards is quite ineffective. One must decide whether to punish immediately or later by analyzing the seriousness of the offense and the probable effects on the individual and the group. In analyzing time for punishment, one should also consider the form of the punishment and the procedures for changing the attitude of the individual.

FORM OF PUNISHMENT

The form of punishment should be related to the nature of the misbehavior in specific situations. The offender who mars school property or personal effects of classmates should be required to make restitution. Thus, if one student maliciously breaks another's glasses, he should make restitution. Any malicious destruction of property may be handled in this way provided it does not cause extreme hardship on the offender and thus lead to more serious misconduct.

Loss of privilege is frequently used as punishment for using profane language, cheating, or creating a classroom disturbance—offenses which have no closely related punishment. Extra work also fits into this category. Here we face one of the difficult problems in use of punishment. When the individual is punished in some form not closely related to the misconduct, it is probable that the punisher and not the punishment will be associated with unpleasantness. Thus when the punisher is not present, the individual continues the misconduct.

Forced apology to the teacher or to classmates is sometimes employed, as is expulsion from the room or school. These forms of punishment are probably more severe than moderate corporal punishment, privately administered. Unless the individual seriously interferes with progress of the group, they should not be used. Some persons recommend never using them.

Mass punishment is extremely dangerous, particularly when the whole class or several in a group are punished for the offense one individual has committed. It is unwise to try to force students to reveal the identity of an offender by punishing all of them. Whole-school strikes and class strikes against a teacher are frequently incited in this way.

For minor offenses in which punishment is employed, it is best not to call the attention of the class to the offense or to the punishment. The teacher should handle the situation firmly, quickly, and with least classroom disturbance. In most cases, some classmates will identify themselves with the student being punished; therefore, advertising it causes widespread resentment against the teacher. Also, the student loses prestige with his classmates and may become antagonistic toward the teacher. In all forms of punishment except for serious offenses, effective procedure is to get the punishment over quickly, to make sure that resentment is not continued between student and teacher, and to get productive work started immediately.

SEVERITY OF PUNISHMENT

When punishment is so severe that the individual does not want to return to the classroom, to improve his conduct, or to work with a teacher who administered the punishment, the student cannot be helped by the teacher. Opportunity for helping the student grow in self-discipline is lost, and the punishment intensifies the individual's maladjustment. Except for most serious offenses which greatly impede progress of the group, punishment should not be so severe as to produce these results.

One cannot predict accurately how severe a punishment is for an individual except through knowing him and, especially, his home situation. A sarcastic verbal attack may be more severe for the timid, shy girl than a hard whipping for the boy who receives whippings frequently at home. To decide severity of punishment for an individual one must take into account the individual's feeling about it.

Courts, to assure justice for all, have organized identical punishments according to the seriousness of specific offenses regardless of causes of offense, effect of punishment on the individual, or effect on the individual's social group—for example, his family. In our classrooms we want to be just to maturing adolescents. Because they are maturing individuals who have potential for growth in self-direction, identical punishments for specific offenses should be avoided. Severity of punishment should be decided for specific cases, taking into account the nature of the offense, the cause which led to it, and the effects of the punishment

on the individual's growth toward a more desirable pattern of conduct.

In summary, administering punishments is so fraught with unknowns that use of punishment should be minimized. These generalizations may help to clarify the situation: Recognize that misbehavior is a symptom of maladjustment. Try to discover causes before punishing. Punish if it is the only effective way to divert attention from undesirable conduct. Punish if it is the only effective way to prevent the individual from seriously interfering with progress of classmates or destroying morale within the group. Take care of minor punishments yourself and get them over quickly. Wherever possible, relate the punishment to the offense. Carefully consider the severity of the punishment and recognize that through severe punishment you may lose all opportunity to help the individual. Make the time of punishment the beginning of a remedial program.

REMEDIAL PROCEDURES

Misbehavior is a symptom that something is wrong with the classroom situation or that the student already has established undesirable attitudes and conduct which break out in the classroom. In either case, punishment itself does not help the teacher discover what has led to the misbehavior. Students who need to be punished usually need help of a remedial kind.

Remedial procedures are necessary also for the withdrawing individual. The shy adolescent, the daydreamer, and the isolate do not disrupt the work situation as do aggressive students; therefore they are frequently overlooked in remedial programs. Withdrawn individuals are likely to be more highly maladjusted than are the aggressive because they have already ceased to fight back and have lost initiative for seeking attention and approval.

What are the basic elements in a remedial program? What action does the teacher take to help the personally maladjusted or antisocial individual? The major steps in a remedial program are (1) to analyze the classroom situation to determine if the causes lie within the classroom itself, (2) to analyze the adolescent to discover causes of his behavior, and (3) to plan a program for improvement and put it into action.

DIAGNOSIS OF THE CLASSROOM SITUATION

We have already examined kinds of classroom procedures and kinds of group atmospheres which produce frequent occurrence of aggressive and withdrawal conduct. The well-managed classroom in which learning activities are organized to meet the interests and needs of adolescents produces relatively few discipline problems. Except in schools where morale is very low among student body and faculty and in classes that have many students with antisocial motives and conduct, it is probable that most causes of discipline problems lie within the curriculum organization, the teacher's direction of learning activities, or the teacher's management of interpersonal relationships in the classroom. Any of these may lead to undesirable conduct.

The immediate situation which produced the maladjustment needs to be diagnosed. An unreasonable work assignment like asking students to work twenty problems in ten minutes when only a few can finish in that time, an arbitrary demand for complete silence while the teacher reads poems in which the students are not interested, asking the girl who is ashamed of her facial appearance to give a five-minute oral report—any of these immediate situations produce frustration and undesirable conduct.

In some situations the teacher may have to alter procedures which generally work effectively for most members in order to take care of an individual so that he gets different treatment. The classroom situation itself does not directly cause the maladjustment, but to help an individual requires special provisions. One cannot set up these special provisions until the individual case is thoroughly diagnosed.

DIAGNOSIS OF THE ADOLESCENT

The learning environment of the adolescent includes his home, his neighborhood, and the broader community as well as the school. His attitudes and behavior are shaped by experiences he has had with other human beings and to some extent by heredity. His reactions in a particular situation may be greatly influenced by his attitudes toward the situation and by his outlook and plans for the future. Thus, a comprehensive analysis of all aspects of his behavioral patterns must be

made. Ordinarily, this analysis begins with an interview between the adolescent and the teacher to get immediate information; then other needed information is obtained as described previously in making an observational case study.

Because each case must be considered separately, no definite point at which to start the study can be indicated which will apply in all cases. The important areas which must be investigated are (1) the individual himself—his health, developmental status, social and emotional maturity, mental development, aptitudes, interests, and plans; (2) the individual's school record—educational achievement and attitudes toward the curriculum, classmates, and adults; and (3) the individual's home—his relationships with siblings and parents, their relationships with him, and the economic, social, and emotional characteristics of the home. In each of these areas, information concerning present status should be obtained first; when this does not prove conclusive it is necessary to go into the history of the case—perhaps to infancy.

A study of this kind should lead to an understanding of the intensity of the maladjustment, the duration of the maladjustment, and the area or areas which need to be modified. This understanding is necessary to plan and carry out a remedial program.

PLANNING AND EXECUTING A REMEDIAL PROGRAM

The teacher alone can do a great deal to help students make more satisfactory adjustments when the problem is not extremely serious, when it is of relatively short duration, and when the home situation is not extremely difficult. In very serious cases, the best assistance the teacher can give the adolescent is to refer him to the school counselor or some out-of-school agency which has specialized personnel and necessary resources to help him. The teacher then coöperates in carrying out the remedial program. Further details concerning these procedures are outlined in the next chapter.

In planning and executing a remedial program one must be guided by the nature of the adjustment problem. In some cases the program may be carried out entirely through changing the individual's attitudes or helping him solve the problem in counseling interviews. In others,

changes within the school program or changes in the individual's attitudes toward the home situation may be necessary. Generally, the program should start in those areas over which the school has immediate control—the attitudes of the student and the instructional program.

Here are sample cases which may cause serious problems in the classroom and which may be improved through counseling interviews wherein the individual changes his attitudes: (1) the student who withdraws or overcompensates for a physical defect such as poor vision which necessitates wearing glasses; (2) the student who demands undue attention after prolonged illness; (3) the student who withdraws or becomes aggressive because of a developmental problem such as fatness, shortness, late or early maturing; (4) the member of a minority group who feels he is being treated unfairly when he is not; (5) the student who, because of extreme economic status, either rich or poor, does not associate harmoniously with other class members; (6) the student who has unrealistic goals in terms of his own aptitudes and abilities.

Effective remedial programs may often be worked out for students like these without going beyond counseling interviews. Sometimes the teacher may need to enlist the coöperation of other teachers who also have the student. Sample cases in which coöperation from other teachers is required include: (1) the student who has low ability and is failing in several classes; (2) the student with high ability who creates disturbances because he is not sufficiently challenged or has already developed an attitude of getting by with least effort; (3) the student who for any reason not controllable by him is being ostracized or ridiculed by classmates; (4) the student who is already far behind classmates and has given up effort to catch up in his work; (5) the student who has made a poor choice of curriculum or cocurricular program; (6) the student with work or other responsibilities outside school who cannot keep up in school work.

In all cases in which the maladjusted behavior occurs in the relationship between the individual's characteristics and the requirements in the various classes, the remedial program takes into consideration all the teachers with whom the individual has classes. Unless teachers are

willing to coöperate in these programs, it is unlikely that they will be successful. Very frequently, the remedial program requires getting the student to want to help himself and then setting up classroom situations wherein teachers give him special assistance in helping himself.

Whether teachers should try to change a home situation is debatable. The degree of skill a teacher has in working with parents is probably the most important factor in deciding whether or not to go into the home for the purpose of making some kind of change. Often when the home situation is involved, it is easier to change the attitudes of the student toward parents than to go into the home and try to change the attitudes of the parents. Sample cases in which the home situation should be changed or an understanding established between child and parent include: (1) the student who is compared unfavorably with siblings by parents; (2) the student who is expected to achieve beyond his abilities; (3) the student whose parents insist unwisely on his educational or career choice; (4) the student who is neglected financially, emotionally, socially, or morally; (5) the student who is overprotected; (6) the student who has rebelled against parents because their attitudes or customs are different from those taught in the school.

In working out a remedial program where the home is involved, assuredly the teacher should enlist the support of other school people and community agencies whose specialty is in working with the home. Where the teacher assumes initiative for the approach to the home, it is well to have the student make the arrangements for the time of visit, to have clearly established purposes of the visit including specific types of information to be secured, to be friendly toward parents regardless of their attitudes, and finally, to make sure that the visit to the home will not lead to a more serious complication of the student's adjustment problem. It should be assumed that if a change is made in the home, it will come because the parents know that the teacher is genuinely interested in the welfare of the child and because they want to make the change or are willing to give the teacher's suggestion a trial.

One teacher reports an incident which is worthy of careful analysis because of the high purposes expressed which are typical of many conscientious teachers. The straightforward account in the teacher's clear phraseology follows:

Marie, age 12, in the seventh grade, was an excellent speller and average in other work. The problem which arose was that she had too much time for doing nothing. After class discussion ended and the study period for words began, she knew hers in about one-third less time than other students needed. Then occasionally, she would whisper noisily, distracting students who needed to study, and often would just sit there and giggle. After a talk with Marie, she was better, but not for long. In another class she presented the same type of disruptive behavior.

Our school records gave some information about Marie, as well as did other teachers, the principal, and school nurse. A lady who had at one time employed Marie's mother as a house cleaner, gave a good account of the mother. She came from well-educated folks, out-of-state, and was the second wife of Marie's father. The mother was very neat, dependable, clean, and was very particular about her children's associates and behavior. Our principal gave material about the father as hard working, a truck driver at present, and an eighth-grade graduate. Our superintendent did not approve of my visiting the home. No teacher had been to see this family and he wondered if they would resent it. I told him about the other information which I had secured, and he agreed a visit to the home might be helpful.

I was invited into a very spic and span home with a most gracious manner by the mother. During our conversation, I mentioned my real reason for being there as being concerned about Marie. Mrs. B. was very interested, and finally ventured that she did know that Marie was interested in drawing but she had discouraged it. Mrs. B. finally said that she did not think any good could come from it and nice people did not draw and waste time in such manner. She also stated she had told Marie never to let the boys and girls at school see her draw or they would tease her. I tried to convince the mother, after looking at some drawings she had made, that perhaps the daughter's talent was here—often the pictures carried short verses. It took two visits before Mrs. B. gave me permission to try to encourage Marie.

Several days passed and I approached Marie during her hilarious giggling-and-whisper episode and asked her if she liked copy work or any kind of drawing, stating I had some I had to do and would like her help. The next day during class she came up and presented a group of drawings she had made. After looking at them I asked if she could think of some manner to use some drawings to encourage and interest students in various subjects. She asked if they could be funny, to which I agreed.

The discipline problem completely disappeared and in discussing what

I had found with other teachers, and with their encouragement too, she has done some really splendid work. She is in high school now doing posters and many other drawings to advertise plays, class parties, events, etc. At Christmas she had an eight-verse poem which she read at church and in school assembly. As much checking as we teachers and our principal have been able to do, not yet has another discipline problem arisen with her. She seems to have adjusted and uses spare time when studies are completed to sketch or write verses.

Students in her section became quite interested in her; oftentimes ask if she'd write a verse about them or go to the blackboard and sketch something. To other teachers and myself, we felt lucky in finding out what she really could do and to influence her parents that drawing was not so "wicked" as the mother seemed to think.

Undoubtedly, the reader will recall many similar instances in which an interested teacher has been responsible for helping an individual make a more adequate adjustment. Many parents, when they understand a situation thoroughly, are willing to provide money for medical examinations and corrective measures, to buy better clothing and school supplies, to improve diet and health conditions in the home, and to change their plans for the adolescent. When school people are also willing to effect changes in the instructional program, the adolescent frequently responds positively. More so than many parents and teachers realize, the high school is extremely important to the adolescent in his growth toward self-direction and self-discipline.

SUMMARY

The purposes of discipline are twofold: to help the student grow from dependence on adults for direction and control to self-direction and self-discipline based upon an understanding and practice of the ideals of democratic citizenship, and to set up in the classroom an orderly work situation so that learning activities proceed smoothly.

The mental hygienist is primarily concerned with constructive procedures which produce self-directive, socially conscious individuals who are secure in their feelings toward self and toward others. Classroom procedures which achieve these results prevent many incidents of disorderly conduct, withdrawal behavior, and poor work conditions. How an individual behaves and works is in part determined by morale within the groups of which he is a member.

Morale within a group of maturing adolescents depends on many factors, chief of which is the way the leader carries out his responsibilities. The climate within a group may be appraised in terms of unity of feelings among the members, goals for which individuals and groups strive, and quality of interaction among group members and the leader. Depending upon what the teacher has set as the goal to be achieved through management of the social climate, it may be anarchic, repressed, competitive, or coöperative. In any climate, specific situations may arise where punishment by the leader is necessary.

The following guides clarify use of punishment: (1) Recognize that misbehavior is a symptom of maladjustment. (2) Try to discover causes before punishing. (3) Punish if it is the only effective way to divert attention from undesirable conduct. (4) Punish if it is the only effective way to prevent an individual from interfering seriously with progress of classmates or group morale. (5) Take care of punishments for minor cases yourself and get them over quickly. (6) Wherever possible, relate the form of the punishment to the offense. (7) Carefully consider the severity of punishment and recognize that through severe punishment you may lose opportunity to help the individual. (8) Make the time of punishment the beginning of a remedial program.

An effective remedial program involves appraisal of the specific situation in which the maladjustment is manifested, appraisal of the adolescent, and planning and carrying out a remedial program in terms of the appraisal. Remedial programs may follow this pattern: First, modify the adolescent's attitudes; second, make changes in the school environment; and third, alleviate or change unsatisfactory home conditions. The process of readjustment is frequently long and requires much more teacher energy than does a positive program which prevents the occurrence of maladjustment.

QUESTIONS AND ACTIVITIES

1. Discuss the meaning of discipline, disciplinary measures, and the purpose of discipline.
2. Drawing from your own high school experiences, arrange the eight

guides suggested for producing a mentally healthful classroom in the order in which they were carried out most effectively.

3. Identify factors which might prevent a teacher from carrying out sound mental hygiene practices in the classroom.
4. Discuss the characteristics of anarchic, repressed, competitive, and coöperative social climates.
5. With one person assuming the role of the teacher and three or four others taking roles of pupils, conduct a sociodrama which illustrates each of the climates discussed.
6. Should the teacher try to build the same type of climate with all groups in all situations? If not, describe situations where a repressed, competitive, or coöperative climate should be sought.
7. Explain the relationship between use of punishment and classroom morale. Do the same for classroom morale and a good working situation.
8. Appraise the adequacy of the criteria proposed for deciding whether or not to punish.
9. How do time of punishment, form of punishment, and severity of punishment affect the use of punishment with individuals? With groups?
10. When should a remedial program be initiated? Which students need help of a remedial nature?
11. Discuss the major features of a remedial program.
12. Organize a debate, panel discussion, or sociodrama for the purpose of clarifying such problems as (a) how to secure an effective work situation in different classes, (b) when, how, or whether to use punishments, (c) when and how teachers should work together in a remedial program, and (d) when and how to improve home conditions for a maladjusted youth.

REFERENCES

-
- Association for Supervision and Curriculum Development, *Fostering Mental Health in Our Schools*, Washington, National Education Association, 1950.
- Fenton, Norman, *Mental Hygiene in School Practice*, Stanford, Stanford University Press, 1943.

- Klein, D. B., *Mental Hygiene*, New York, Henry Holt and Company, 1944, chaps. 10, 15, 16.
- Prescott, Daniel A., *Emotion and the Educative Process*, Washington, American Council on Education, 1938.
- Rivlin, Harry N., *Teaching Adolescents in Secondary Schools*, New York, Appleton-Century-Crofts, Inc., 1948, chap. 12.
- Schorling, Raleigh, *Student Teaching*, New York, McGraw-Hill Book Company, rev. ed., 1949, chap. 4.
- Sheviakov, George V., and Redl, Fritz, *Discipline for Today's Children and Youth*, Washington, Department of Supervision and Curriculum Development of the National Education Association, 1944.
- Symonds, Percival M., *The Dynamics of Human Adjustment*, New York, Appleton-Century-Crofts, Inc., 1949.

Guidance Services and Classroom Instruction

Improving the quality of guidance services for high school youth has received much attention in recent years. Secondary schools are assuming increasing responsibility for (1) assuring that each student gets into those courses and other school activities best suited to his educational needs, (2) providing each student with opportunity to find solution to personal problems in conference with a skilled counselor, and (3) assisting each student to discover his aptitudes and abilities in relation to different careers so that he may choose his career wisely.

Guidance and instructional programs are not rigidly separated; rather, they are closely integrated, and both aim to provide a good learning environment for youth in the high school. We may look at the relationship between guidance and instructional services in this way: The teacher is a specialist in providing instructional services. The guidance specialist is one who has particular understandings, skills, and attitudes useful in performing guidance services. Since both instructional and guidance services are organized for the benefit of the same students, they must be closely integrated. Through rendering effective instructional service, teachers make an invaluable contribution in guiding the individual student. Through rendering effective guidance services, the guidance specialist helps teachers provide better instruction and also directly assists some students to make better adjustments to the total school program.

In the first part of this chapter the role of the specialist in guidance

is outlined to indicate six major services included in an organized program of guidance and also to show how the work of the specialist is related to that of teachers. It should be noted that a teacher may perform one or more of these services and that, to be a guidance specialist, one should have had experience as a teacher. Therefore, in reading about the duties of a specialist, recognize that many of them may be performed by the teacher who has sufficient time, adequate preparation, and a guidance point of view toward youth and instruction. In the second part of the chapter guidance services which teachers perform are outlined. Because the duties of the administrator, guidance specialist, and teacher vary widely depending on how the total high school program is organized, reference to types of organization is made to clarify the role of the teacher.

THE SPECIALIST AND GUIDANCE SERVICES

Guidance services supplement the regular educational program. The specialist in guidance (1) assists teachers in securing and in using appraisal information to understand students as individuals; (2) coordinates the collection and dissemination of occupational information, the surveying of occupational opportunity for youth in the community, and the organization and administration of the work-experience program; (3) counsels individual students, assists teachers in building counseling skill, and makes arrangements with the principal to provide space and time arrangements for teachers to serve as teacher-counselors; (4) helps teachers organize and systematize group guidance activities; (5) maintains working relationships with out-of-school agencies for gathering information and referral of students; (6) directs research concerned with the educational and guidance program.

These are six important guidance services rendered by specialists in the larger school systems. You note that much of the work is coordinating and directing; teachers, except for some counseling and directing research, do most of the work which helps students make better adjustments and plan more wisely.

Currently, many schools do not call the person who performs these services a guidance specialist. In many cases principal, assistant principal, dean, adviser, or a teacher assumes major responsibility for one or

more of the services. In large school systems a psychometrist or school psychologist is in charge of the individual appraisal and research program; a vocational guidance director or vocational psychologist coordinates the vocational guidance program; full-time counselors conduct interviews with students to help them solve personal problems and plan more effectively; home visitors or social workers visit homes and coordinate the program between school and referral agencies. Chiefly, the size of the school, its organizational pattern, and the relative importance given to an organized guidance program within the school determine the number of specialists and delimitation of duties. A small school may have one counselor with part-time teaching duties to supervise all guidance services.

COORDINATING THE APPRAISAL PROGRAM

Securing information about the individual student and using it to help him plan his educational program and career and to solve his personal problems is an important part of the guidance program. In previous chapters the importance of student appraisal in organizing classroom learning experiences to meet student needs was stressed. Devices for appraisal of the individual such as anecdotal records, sociometric techniques, case studies, check lists, questionnaires, and tests have been discussed briefly. Use of the cumulative record was noted. The guidance specialist has the duty of systematizing methods for appraisal of the individual, working out an effective record system whereby pertinent information is available to school personnel, and helping teachers develop procedures for using the information to best advantage. Teachers contribute in appraising individual students and use information obtained by themselves and others to understand students' backgrounds, interests, abilities, aptitudes, problems, and plans. Frequently, teachers need assistance in developing appraisal and recording procedures and in interpreting data.

Types of Appraisal Information. Among the more important kinds of appraisal information to be secured periodically and recorded cumulatively are:

1. Home and family relationships: parental occupation, socioeconomic status, neighborhood influence on developmental patterns of child,

- emotional climate in the home, plans and aspirations of parents for the child. In every school and with every student, decision must be made as to how comprehensive this home survey should be, how often information should be obtained, and who should get it.
2. Developmental and health status. The most efficient use of time and most inexpensive way to secure this information is through setting up a system of yearly medical examinations. The medical records, which include measurements of weight and height, locate individuals who are healthy and those who have defects, low vitality, and illnesses. Only those adolescents with poor health, low vitality, or defects should be examined historically from birth to present. It is wasteful to go into the home each year to get a complete growth and health record for normally developing, healthy adolescents.
 3. School record. Courses taken and grades made, attendance, cocurricular participation, anecdotal records by teachers and other summaries of informal appraisal, present educational status, and educational plans provide most useful appraisal information in this area.
 4. Out-of-school information. Work experience, travel experience, and principal leisure activities are the main records needed in this area. Here, too, the extent to which comprehensive accumulation of data is to be maintained needs careful delimitation. Generally, we should accumulate only those facts which help us appraise the individual.
 5. Test data: records of all standardized achievement, intelligence, vocational interest, personality, and aptitude tests. Test data and records of courses completed should be kept cumulatively because so little space is needed for the entries and because, when properly interpreted, these data reveal a great deal concerning the individual.
 6. Summary records of counseling conferences, conferences with administrators, and any court records.

In allocating specific responsibilities of teachers for securing appraisal information, careful delimitation is necessary so that duplications and omissions are avoided. For example, there is no need for all five teachers who have the student to visit the home; neither is there need for a teacher and a counselor to make a case study of a maladjusted adolescent. Also, in recording information in the cumulative record, caution must be used to keep a record which is easily usable and not

cumbersome. If, for example, all the information obtainable from the home were to be recorded each year the record would become so unwieldy as to be relatively unusable.

One important area of appraisal in which teachers need assistance is that of selecting, administering, and interpreting recently standardized tests. New tests are being standardized; some of these are useful tools in appraisal. Usually the teacher is familiar with standardized achievement and diagnostic tests; these are described more fully in the next chapter. There are other types of tests, developed especially for appraising other aspects of the individual's developmental pattern, with which many teachers need assistance. We shall examine four types of tests and one representative test in each area to illustrate how a specialist may help teachers secure and interpret appraisal information.

1. Vocational interest inventories for high school use have been standardized for the purpose of assisting students to discover how their interests compare with interests of adults successfully engaged in various occupational fields. The vocational interest inventory is one of many tools used to discover the occupational field in which the student's interests lie; it does not indicate whether he has the ability and aptitude necessary to be successful in the field. With little time and study, teachers may learn to administer interest tests; interpreting test scores requires considerably more study. If the results are to be useful to the student in planning a program of study or in deciding upon a career, he must understand his scores. Ordinarily a student can profit from taking a vocational interest inventory only through private conference with an adult who fully understands the scores and who is skillful in helping the student to understand them. Placing students in particular courses or recommending a career to be pursued without a personal interview with the student is a dangerous misuse of interest testing.

The Kuder Preference Record for grades nine–sixteen and adults is a measure of vocational interest.¹ Form BB of this test, 1942, consists of 168 groups of activities, three activities to a group. In each group of three, the subject checks the activity he likes most, then the activity

¹ *Kuder Preference Record*, Form BB, Chicago, Science Research Associates, 1942.

he likes least. In the fourth group, for example, he makes the choices among these three:

Build bird houses.

Write articles about birds.

Draw sketches of birds.

Scores obtained indicate preferences for activities related to nine general areas: mechanical, computational, scientific, persuasive, artistic, literary, musical, social service, and clerical. (A later form includes a tenth area: outdoors.) Norms have been established to indicate how an individual's score in each area is related to scores of persons successfully engaged in various occupations. To help interpret profiles, norms are established which show scores that are significantly high or low. Further, those occupations related to each general area are listed, as are those occupations related to any one of thirty-six possible combinations of two general areas. Thus, the first occupation listed for mechanical and computational is accounting machine operator.

Two other widely used vocational interest inventories are those developed by Strong and by Lee and Thorpe. It appears judicious, especially with adolescents under age eighteen, to administer two inventories for purposes of comparison. This practice involves more time and expense, but the interpretation of interest is undoubtedly more valid. Inventory results need to be interpreted to students in counseling interviews with them. The facts and information about interests which the student brings to the teacher or counselor in the interview are very important in helping him to decide his educational or vocational plans.

2. Aptitude tests are those which discover the individual's ability to profit from particular kinds of instruction and practice. Many tests have been constructed to discover aptitude in the fields of music, fine arts, mechanical arts, clerical work, manual dexterity, and others. Large corporations and the military services use aptitude tests to find personnel for particular jobs. Some aptitude tests, as for music, are used in the elementary grades. Vocational interest and aptitude tests provide complementary types of information which are useful to the student in selecting courses and a particular program in the senior high school. Aptitude test results are most useful to the individual student when his

scores are interpreted to him in counsel with a person who knows the strengths and weaknesses of the particular test being used and who fully understands what the results mean. Each student should be helped to plan his educational program; aptitude test results are useful for this purpose when the student understands his aptitudes and particular course offerings in relation to aptitudes possessed.

The SRA Clerical Aptitudes Test² is designed to measure ability to learn clerical jobs. Three different aspects of clerical work are tested: Office vocabulary, office arithmetic, and office checking. This is a group verbal test, and each of the subtests is timed.

Office vocabulary consists of 48 items. In each item two words are presented—big-large, left-right, good-night. The subject indicates whether the words mean the same, the opposite, or neither.

Office arithmetic presents twenty-four problems. The subject may use scratch paper; he chooses one of five answers as correct:

A train travels 30 miles in one-half hour. At the same speed, how many miles can it travel in five hours?

(1) 150 (2) 300 (3) 360 (4) 75 (5) none of these

Office checking has 144 items in three groups of forty-eight each. A key is presented in which sixteen words are assigned numbers. The subject is given one of the sixteen words in each item and chooses one of five numbers which is correct for the word.

This test is widely used in industry, and employers place considerable trust in its accuracy for measuring clerical aptitude. It is also used in high school.

3. Personality inventories constitute a third type of test. Many students are unsuccessful in particular courses, as are many adults in their vocations, because of personality maladjustments and disorders. Requisite interest and aptitude are present, but the student is not successful in music classes because he is unable to solve personal problems arising outside school and social problems in adjusting to fellow students and adults. Appraising emotional aspects of total personality structure is a relatively new field, but progress is being made. Inventories are used in high school which help identify emotional tendencies likely to be-

² *SRA Clerical Aptitudes Test*, Form AH, Chicago, Science Research Associates, 1948.

come more acute with maturity. Ordinarily, these tests are not administered to the whole student body but are used with students whom teachers have located as being unmanageable or unapproachable—students too seriously upset emotionally to profit from instruction in usual classroom situations. Personality testing gives information useful in counseling and in planning remedial programs so that the individual student makes a better adjustment. The student with well-established tendencies toward emotional maladjustment can usually be assisted only when an adult spends considerable time with him in counseling and when a remedial program is planned coöperatively by the counselor and the teachers with whom the student has classes.

The California Test of Personality³ is a group verbal inventory to be administered and interpreted by teachers. As it is described more fully, note how items are constructed to measure aspects of personality.

The 1939 edition for secondary use was designed to measure six aspects of self-adjustment: self-reliance, sense of personal worth, sense of personal freedom, feeling of belonging, freedom from withdrawing tendencies, and freedom from nervous symptoms; also six aspects of social adjustment: social standards, social skills, freedom from antisocial tendencies, family relations, school relations, and community relations. There are fifteen questions in each of twelve subtests to be answered Yes or No. Norms are established to convert raw scores of each subtest into percentiles. One plots a profile of the individual's personality pattern derived from scores on each subtest, total scores of the two parts, and total score.

The first item for each of the first six subtests is given.

1. Do you usually do something about it if someone steps in front of you in line?

16. Are you usually considered brave or courageous?

31. Are you allowed enough time to play and have a good time?

46. Do you feel that you are an important part of your school?

61. Are certain people so unreasonable that you can't help but hate them?

76. Are you likely to stutter when you get worried or excited?

³ Louis P. Thorpe, Willis W. Clark, and Ernest W. Tiegs, *California Test of Personality: A Profile of Personal and Social Adjustment, Secondary, Form A*, Los Angeles, California Test Bureau, 1939.

You will find it interesting to read the inventory in entirety and the manual accompanying it to discover what test makers consider important aspects of personality and how to measure it. You already have noted that there are fifteen items per subtest and that each subtest score is converted into a percentile rank in building a profile. Critical reviewers⁴ doubt that tests with such low possible range in raw score are very useful in accurately locating an individual's adjustment. Also, as with aptitude, interest, and other personality tests in general, paper-and-pencil tests are somewhat limited in measuring what they are supposed to. They provide useful information when properly interpreted with other information.

4. Individual intelligence tests such as the Revised Stanford-Binet Scale and the Wechsler-Bellevue must be administered by a person skilled in testing. A group intelligence test may be administered by teachers. Group verbal intelligence tests—intelligence tests in which students must read the instructions and the problems—frequently are unfair to students who (1) are retarded in reading, (2) come from a home background where vocabulary used is very different from that used in the test items, (3) come from a home or school background where problems of the type contained in the test items are infrequently met, (4) have a serious visual or auditory defect, or (5) are emotionally upset or disinterested while taking the test. For students in these categories, one administration of an individual intelligence test is more reliable and valid than administration of several group tests. A person skilled in administering the individual test obtains a fairly accurate estimate of general intelligence and also secures other information during the testing which helps him gain a better understanding of the student. Individual tests are somewhat unfair to the same individuals as are the group tests; however, a skilled tester can detect the individuals fitting into those categories much more readily than can the teacher administering the group test.

Besides measuring mental age, which supplies the basis for computing IQ score, the tester also may rate the student's motivation, per-

⁴ Oscar K. Buros, *The Third Mental Measurements Yearbook*, New Brunswick, Rutgers University Press, 1939. In this yearbook critical reviews of each test discussed in this chapter may be found.

sistency in attempt to solve problems, and emotions expressed. To interpret what an IQ score really means, the tester should know how it is related to subject achievement, artistic abilities, manual abilities, and the like.

A brief inspection of the tests mentioned immediately poses problems: (1) What criteria will be used in selecting tests? (2) At what grade levels should the tests be administered? (3) When during the year should they be administered? (4) Who will administer tests and record results? (5) How will test results be made useful to students? All teachers are concerned to some extent with these problems and usually spend a considerable amount of class time in administering tests and out-of-class time in scoring and recording. Too often, large-scale testing programs are carried out, the results of which are never made useful to students through teachers.

The whole appraisal system needs careful organization. The counselor, administrator, or teacher in charge should work out procedures whereby responsibility for securing types of information is clearly established. Equally important, a record system must be operative wherein pertinent information is readily available to teachers, administrator, and counselors. In many high schools the cumulative record is used primarily by the administrator, not by teachers. Often it contains some completely irrelevant information; often, too, many kinds of useful information are not available. In schools where the appraisal program is operating smoothly, an adequate cumulative record is maintained and used. The counselor maintains an individual inventory file for his counselees which includes information from the cumulative record, from teachers, and from students themselves. Procedures are in effect whereby teachers, in their classrooms, receive pertinent information about their students.

COORDINATING OCCUPATIONAL INFORMATION AND WORK-EXPERIENCE SERVICES

Many schools (1) supply students with information concerning occupations, (2) offer courses such as vocational agriculture, home economics, trades, and distributive occupations which are supported with federal funds in part, (3) arrange part-time work for students needing

jobs, and (4) offer work-experience programs in which students engage in exploratory work activities as part of their high school education.

Occupational Information. Characteristics of occupations, including duties to be performed, number employed, working conditions such as hours, pay, hazards, etc., permanency, and requirements for entering have been catalogued. Pamphlets, books, and catalogues which give pertinent information are available for most occupations. The person in charge of coordinating vocational guidance services, in cooperation with the school librarian, makes such information available to teachers and students in a classified file of occupations in the school library. Procedures for using films, taking students into the community, and bringing community personnel—e.g., the Director of United States Employment Services—into the classroom have also been outlined. Frequently classroom teachers assume much responsibility for disseminating occupational information as part of the regular instructional program. The whole program for doing so needs careful planning to prevent duplications among various classes and to prevent omissions in others. Occupational information is useful to students when they analyze it in relation to their plans, abilities, and aptitudes. General class discussion led by the teacher is useful in analyzing it. Counseling individual students is necessary to make sure that all needed information is obtained and that it is understood and used.

Vocational Courses. Courses to help students prepare for careers in agriculture, home economics, trades, and distributive occupations may be financed in part with federal funds. Each state outlines specific requirements beyond those set up by the federal government which local schools meet to secure funds for this phase of vocational education. To secure federal assistance, to carry out requirements set forth by the state, to organize vocational courses to meet the needs of students in the local community, to decide which students in and out of school may take these courses, to maintain records usually required to participate in the program—meeting these responsibilities requires specialized information and skill. Teachers who have been educated to provide instruction in a specific area of vocational education such as home economics or agriculture know the requirements in their area

and can evaluate their program in relation to the whole secondary program. When instruction in trades and distributive occupations is included in the curriculum, the problem becomes more complex; for teachers here must be skilled in the trade and need not meet usual requirements for obtaining a teaching license or credential. Frequently, a coordinator is needed in the larger schools to organize and to supervise a satisfactory program of vocational courses.

Part-time Employment. Some students need jobs to pay part of their expenses in getting a high school education. Students secure work during vacations, on week ends, and during the school week. Questions immediately arise when the school attempts to secure and supervise student employment: (1) What are the state laws regarding age, hours per week, and minimum wages for minors? (2) What are local civil and school policies? (3) What are union regulations for particular jobs? (4) To what extent is the school responsible for seeing that the student is not exploited or does not work to the point at which he does not profit from attending school? Along with securing answers to the above, the school often maintains a placement service and surveys the local community to discover jobs for students.

Work Experience. The most skilled counselor may work with a student to help him gain an understanding of himself in relation to job specifications; yet the student upon graduation finds that the career he has chosen is unsatisfactory. To avoid this situation, some schools organize work-experience programs as an integral part of secondary education. The tendency is for more schools to do this. In such programs, a committee of school and community personnel surveys jobs currently available, works out hour and wage procedures, sets up placement services, and arranges for amount of instructional credit to be given toward graduation. Students work in the school and in the community on jobs in which they feel their interests and aptitudes lie. They explore how their estimates compare with actual experience. When a school organizes a work-experience program, the part-time employment previously discussed is included in the total program. The placement service locates employment for graduates also.

Occupational information obtained by the student in work experience needs to be related to his interests, aptitudes, and career plans.

The prospective salesman will not profit from working as a welder to the same degree as will the boy who intends to set up a repair shop; the girl who intends to become an elementary teacher will not profit as much from working with a secondary teacher as with an elementary teacher. To locate the jobs and match youth in those jobs for the purpose of assisting them to discover which is probably most suitable as a life career is a major goal of the work-experience program.

PROVIDING COUNSELING SERVICES

The term "counseling" indicates a working relationship between two persons in which they meet in private conference. The purpose of counseling is to help the student identify problems, make better adjustments, and plan wisely. The areas in which students need counsel may be grouped in four broad categories: (1) educational—making decisions and plans related to the curricular and cocurricular program; (2) vocational—making decisions and plans concerning immediate work experience and life career; (3) avocational—making decisions and plans concerning leisure-time pursuits; and (4) personal—problems of adjustment which students meet in connection with classroom studies and teachers, family relationships, health, finances, sex, religion, fears and anxieties, relationships with classmates, attitudes toward own physique, and many others. The four categories are not mutually exclusive. Thus, the student planning his high school program as a sophomore would make plans in relation to tentative career chosen, cocurricular program, and any personal problems such as health or parental wishes which might affect decision in his educational program.

The number of counseling interviews needed to assist students with problems of adjustment and planning varies. Some students decide early upon a career and have few problems of personal adjustment; others need help at frequent intervals and over long periods of time. To provide adequate counseling service to high school youth, opportunity must be available for them to receive it from a skilled counselor when needed. Thus all students in a school should be assigned to counselors or to teacher-counselors in a systematic way. Also, time must be available for the counselor (1) to carry out the counseling

interviews, (2) to work out programs as necessary with teachers with whom the student has classes, and (3) to follow his students' progress. A teacher in the core class or homeroom may be able to provide this service if skilled in counseling techniques and if time and space are properly arranged.

The Counseling Interview. Specific attitudes, understandings, and skills are needed to counsel youth effectively.

The major attitudinal principles underlying counseling are as follows: (1) Each student is worthy of respect and is therefore accepted and not rejected; (2) the student can be helped in solving problems and in making plans; (3) personal problems which students present are held in strict confidence. One anecdote related to each principle illustrates the crucial aspect of attitudes in counseling.

Mary, a junior, says that she left home two nights ago because her parents do not buy her suitable clothes. Early in the counseling interview it is discovered that the real reason is that her parents have refused permission for her to continue dating a bachelor, age twenty-seven. When her parents discovered that Mary had repeatedly lied about her dating, they refused to let her go out, so she left home and is now living with a girl friend. Mary says that she never wants to see her parents again because they are too strict. Is Mary still worthy of respect as an individual? Can the counselor who answers negatively help Mary solve her problem?

Jim, a senior, has been apprehended by civil authorities for stealing on three different occasions during the past year. Currently, he reports to a judge once per month as outlined in a suspended jail sentence. Jim is above average physically and mentally, likes physical activities in school, but shows disrespect to teachers and no interest in academic classes. He will have to remain in school for one semester beyond the senior year to be graduated unless special provisions are arranged. Can Jim be helped in making plans?

Bill, while scuffling with another boy during a laboratory period in a science class, accidentally knocked a microscope off a table. No one reported the breakage to the teacher, who was out of the room at the time. Later, the teacher discovered the broken microscope and suspended use of the laboratory until the "culprit" was apprehended. The princi-

pal called a whole-school assembly for the purpose of discovering the offender. Bill does not take his problem to the teacher or principal. He comes to a counselor because he is afraid that he will be expelled from school. He is dejected and conscience stricken. He states what he has done to the counselor. Should the counselor immediately report him to the principal? Should the counselor work with Bill until he himself wants to take his case to the principal? Should the counselor assist Bill in presenting his case? The counselor who reports Bill's confession to the principal without getting Bill's confidence and approval first will probably receive very few similar cases in the future.

Major understandings needed to counsel high school youth are identified in five areas of study: (1) psychology of adolescence, (2) psychology of human adjustment, (3) techniques for appraisal of the individual, (4) the nature of the areas in which students frequently need counseling help, and (5) counseling techniques. When one counselor serves as coördinator of the total guidance program and also counsels students, he must have information and facts related to all areas of the guidance program. Ordinarily, special courses at the masteral level of college along with internship under a skilled counselor are needed to develop these understandings. For teachers to serve as counselors, it is especially important that they understand adolescents' problems in the particular school and community, the nature of adjustment processes, and their own limitations in counseling.

To successfully organize and conduct a counseling interview one must be able (1) to outline general plans for the conduct of the interview, (2) to establish rapport quickly with the student without forcing, (3) to help the student identify and state his problems, (4) to help the student understand information pertinent to the problem and to outline procedures for obtaining other information, (5) to help the student plan procedures for solving his problem, (6) to know when to refer the student to another person for counsel, and (7) to terminate successfully a counseling interview or series of interviews. Frequently teachers are assisted in developing these skills through working with a skilled counselor. The suggestions which follow are appropriate for teachers who have no such opportunity but who are assigned counseling

duties: (1) The purpose of counseling is to help students solve problems, not to solve problems for them. (2) The purpose of counseling is to help the student make plans, not to make plans which he must follow. (3) A student finds relief from tension through expressing and analyzing his problems, not through listening to the counselor's estimate and analysis of the problem. (4) Many students need assistance from a counselor in easing disruptive relationships with classmates, parents and siblings, teachers, and administrators.

Teacher and Counselor Coöperation. Where special arrangements are necessary to solve the student's problems, close coöperation between counselor and teachers concerned is required. The student who is far ahead of his classmates and bored with classes can be helped only when he wants to help himself and when the teachers with whom he has classes make special provisions for him. The counselor helps the student plan for his improvement and also helps teachers work out provisions for meeting the student's needs more adequately in their classrooms. One technique used in coöperative planning is the case conference.

In the case conference, the counselor or teacher to whom the individual student is assigned brings together all his teachers. The counselor outlines facts which he has and invites the teachers to supplement them. On the basis of this appraisal, a plan for improvement is outlined. The counselor does not outline the plan for teachers to follow. If the plan is going to operate effectively in the teachers' classrooms, they must participate in its formulation; further, they are in better position to estimate what can be done in the classroom than is the counselor. Many problems which students have are solved only when teachers get facts, outline a plan for improvement, and put it into operation. When conditions in the home are involved, it is sometimes feasible to bring parents into the case conference.

Follow-Up of Counselees. One of the most difficult problems in counseling is to decide the time at which a student no longer needs assistance. The only positive way to do it is to make periodic checks of the student's progress. In counseling programs in which certain students are assigned to each counselor, provisions are made for each

student, regardless of whether he feels a need for counseling, to report to his counselor. When the counselor works only with special cases referred to him, follow-up is more difficult.

Some techniques used to follow the progress of the student include (1) having a teacher observe the student and report progress to the counselor, (2) examining marks, attendance, and teacher comments on report cards, and (3) carrying out informal interviews between counselor and teacher. Techniques like these will operate satisfactorily only when close coöperation exists between counselor and teachers.

Evaluating the effectiveness of counseling services requires that students be followed after quitting school or after graduation. When a counselor has a definite group assigned to him, part of his responsibilities include follow-up of his counselees. If this provision is not operative, one counselor or some other school person should conduct investigations of dropouts and graduates.

Providing adequate counseling services for youth is the heart of the guidance program. The counselor or teacher who helps students in making important educational and vocational decisions and in finding solutions to difficult personal adjustment problems provides invaluable service to youth.

COÖRDINATING GROUP GUIDANCE ACTIVITIES

Counseling and group guidance differ in that counseling implies a private conference between two individuals whereas group guidance refers to the work of a counselor or teacher with two or more students. Some of the principal functions of an organized program of group guidance services are to help students (1) understand the educational and cocurricular offerings of the school, (2) understand educational, recreational, and work opportunity in the community, (3) learn about interests, aptitudes, and abilities in relation to educational and vocational needs, and (4) learn social skills in adjusting to school, home, and community life. Group guidance activities do not eliminate all need for individual counseling; rather they may be instrumental in lessening the amount of time required for individual counseling.

The way in which group guidance activities are carried out depends on many factors, chief of which is the organization of the school pro-

gram. Three general patterns are apparent. In some schools the homeroom program is designed as the major means for carrying out group guidance activities; in other schools, the teachers of the core courses assume major responsibility; in still others, classes in guidance, careers, or psychology are utilized. Whatever provisions are operative, overall integration of this program with the whole school program is needed.

Educational and Cocurricular Offerings. Assume that you have a tenth-grade class of thirty students assigned to you in a homeroom and that, besides orienting this group to the school, you are responsible for making sure that each student knows the curricular and cocurricular offerings in the school. What, in relation to course offerings, should the students understand? First, they need to know the constants required of everyone for graduation. Second, they need to know the different kinds of senior high school programs or tracks which they may pursue—general, scientific, commercial, college preparatory, agriculture, home economics, etc. Third, they need to know the classes prescribed at each grade level in the program selected. Finally, they need to know classes which may be elected. By knowing and understanding we mean obtaining a fairly accurate estimate of what is involved in each course. This type of information may be disseminated as a group activity.

Gaining familiarity with the cocurricular program may also be undertaken as a group activity. Various methods may be employed for disseminating this information. The teacher may outline it orally, or it may be presented in mimeographed form. Bringing into the classroom members or officers from the different clubs and organizations may be useful in helping students understand the nature of cocurricular activities.

Community Services. Frequently high school students use educational and recreational facilities provided directly by the community or jointly by the school and community. All students need to know the existence and location of such facilities and requirements for participation or membership. One useful group guidance activity is to outline the services and then organize procedures whereby students already participating in such programs invite other class members to attend.

A few communities provide the following types of services to youth: (1) a twelve-month program of recreational activities including basketball, softball, tennis, swimming, and camping, (2) a well-organized program of clubs, (3) summer and night classes in arts and crafts, and (4) youth centers for social dancing, parties, games, and hobby development under adult supervision. Many youth programs undertaken in communities have been developed from leadership in the school—administrators, teachers, counselors, and students working coöperatively to influence community action.

Interests, Aptitudes, and Abilities. Tests are tools which may be used to appraise interests, aptitudes, and abilities. The purpose of guidance goes beyond measurement of present interest to building interest. Bringing community personnel into the classroom, making field trips, setting up committees of students to secure information concerning areas of interest, organizing committees to identify and analyze general aptitudes and abilities to be successful in various classes and curricula in school—these are but a few of the many kinds of useful group activities.

Activities similar to these may be organized for using the library, the school staff, and community personnel in securing and analyzing occupational information. As stated previously, individual counseling is still required to assure that students have needed information and interpret it accurately.

Social Skills in Adjustment. Student government provides an effective method for helping students to develop social skills whereby they learn to get along better with others and to govern themselves. Each homeroom or core class elects representatives to the student council, which has its officers, meeting place, and operating procedures. The types of activities which the government promotes vary widely, as does the degree of authority delegated to the student governing group. When student government is organized primarily to assist the administrator and teachers in policing corridors, toilets, playgrounds, social events, etc., the guidance function is greatly limited. However, when the student government investigates problems of students in the school and community and makes recommendations concerning school and community action, the guidance function is thoroughly worth while.

Increasingly, committees of students, teachers, and community personnel are being organized to direct recreational facilities in the community. These close relationships between students and adults help youth grow in responsibility, self-direction, and adult citizenship.

The organization of the homeroom or core class is planned to build social skills. Regularly elected officers and committees assume chief responsibility for conduct in the room and make plans for carrying out major activities. Discussion and action committees are organized to analyze (1) conduct at school, in and out of classrooms, (2) methods of effective study, (3) general problems concerning relationships in the home, (4) dating manners, and (5) conduct at social affairs and the like. The homeroom should be the place in the school most like home in that a democratic atmosphere prevails in which students express and find solution to their pressing developmental tasks.

Frequently, whole-school programs such as career days are undertaken as a group guidance activity. High schools are increasingly making provisions whereby students may talk individually to representatives from colleges, industry, and trade during the career day program.

In summary, the variety of group guidance activities which may be undertaken is so broad that it needs careful systematization. The person in charge of the whole guidance program often works with a committee of teachers in outlining the particular activities which will be undertaken each week in the homeroom or core class. Some schools have produced detailed statements of suggested procedures. The best of these statements always provide for flexibility and are based upon an accurate understanding of the problems students have and group procedures for helping them arrive at solutions.

You may be of the opinion that many of the activities and procedures outlined as group guidance activities should be included as part of a regular classroom instructional program. In many cases they are; however, in some schools where no guidance program has been organized only a few teachers include them in their classrooms.

COORDINATING THE REFERRAL PROGRAM

When school personnel cannot help students with problems directly, every effort should be made to utilize community agencies. We

may group students who profit from referral in three major categories: (1) those needing financial assistance, (2) those with severe emotional maladjustment or mental or physical deficiencies, and (3) those apprehended for delinquent behavior.

Financial Assistance. Boys and girls frequently are unable to secure part-time employment in order to buy lunches, clothing, school supplies, and medical services. In many communities public agencies and professional and service organizations supply assistance to needy youth as part of their regular programs. Public health service which provides medical attention to the needy is available in most communities. Kiwanis, Rotary, Elks, and other organizations frequently supply glasses, surgical expenses, and other types of assistance. The number of agencies and kinds of services available vary according to communities. Greeley, Colorado, a city of about twenty thousand population, has organized all groups into a Greeley Council of Social Agencies. In this relatively small community, some eighty-five different agencies exist which provide a measure of assistance to needy youth. Principal tasks of the guidance expert in this area are (1) to know specific types of assistance available, (2) to discover students who need assistance, (3) to make sure that students are referred to the proper agency, and (4) to handle the problems so that the student maintains status in his class, his home, and his neighborhood.

Emotional, Mental, and Physical Handicaps. A student may be disturbed emotionally to the point that the counselor recognizes his inadequacy in helping him. A clinical psychologist or psychiatrist is needed. Mental health clinics often provide this kind of service; sometimes colleges or universities admit students into their clinics.

Provisions to take care of other kinds of serious physical and mental deficiencies may be present: schools for the blind, the deaf, amputees, and the mentally defective. Many states and communities have been slow in providing these kinds of services to the maladjusted and handicapped. Some high schools have been equally slow in using resources available in the state and community because no procedures have been organized for locating the services, identifying students who should be referred, and maintaining good working relationships with the agencies.

Schools and Courts. In recent years the number of youth of high school age apprehended for delinquent and criminal acts has increased. The present tendency is for school and court officials to work out cases involving minor offenses in such manner that the student continues in school. This procedure requires a considerable amount of time by the person representing the school and demands that such person be able to work closely with the home, the school, the court, and other community agencies.

For what types of offenses should a counselor, teacher, or administrator refer the student to the court? The answer is not definitely established because each case must be considered individually. In some schools relatively minor offenses are referred to the court; in others the counselor assumes much responsibility for working out remedial procedures without referral to the court.

Frequently, it is a counselor or other school person who takes leadership in organizing committees composed of representatives from the court, the home, the school, the church, and other segments of the community into a functioning group which acts as a major social force in the prevention of delinquency. Prevention of delinquent behavior requires a total community effort directed at removing causes of delinquency and establishing desirable outlets for youth activity. The need for establishing youth-saving services in the school and community is often not considered seriously until a relatively large number of youth are brought to court.

DIRECTING RESEARCH

A considerable amount of research is needed to organize and evaluate the high school guidance program. Here are some of the principal problems frequently considered in research: (1) How many youth drop out of school? Why? What happens to them? (2) What happens to the graduates? (3) How effective are the health services in the school and community? (4) How adequate and useful is the school's testing program? (5) How adequate and useful is the cumulative record system? (6) How adequate and effective are the vocational guidance services? (7) How adequate and effective are the counseling services? (8) How effective and adequate are the group guidance activities?

(9) How adequate are community resources and facilities and to what extent are they utilized? (10) What are the needs of youth of school age and how well is the high school program serving these needs?

Research of this type supplies information needed to improve the total high school program and living conditions for youth in the community. Direction of such research requires a rather high degree of expertness. However, if the information is to be used in a program of improvement, teachers, administrators, and community personnel should share in carrying out pertinent parts of the research. It is probably safe to conclude that teachers who share in discovering the adequacy of the testing program, of the cumulative record system, or of community services will learn a great deal and will contribute invaluable suggestions for improvement. Bringing community persons into the research program proves an effective means of educating the community concerning the value of a good program of educational and guidance services in the high school.

In summary, guidance services supplement instructional services. Guidance services have been incorporated as an integral part of modern secondary education to help students make better personal adjustments and to plan their educational and career programs more wisely. An effective program of individual appraisal, cumulative record keeping, counseling services, work experience, referral, and research is needed to achieve these purposes. Because teachers are specialists in instruction, other persons skilled in counseling are needed to make the total high school program most effective.

THE TEACHER AND GUIDANCE SERVICES

The point at which the guidance functions of the classroom teacher begin and those of the specialist end is not sharply defined, as you noted in the previous discussion. Both the separation and the correlation of duties are dependent upon the organization of services within the particular school. General guides for teacher participation are discovered through examining (1) the teacher and guidance committees in the school, (2) special kinds of teaching, and (3) regular classroom teaching.

GUIDANCE COMMITTEES

Guidance services are to supplement the regular secondary education program. The regular program will be more effective primarily because teachers want to make it so; therefore, teachers should be represented on guidance committees so that they share in deciding what guidance services are needed and how they will be implemented.

A school has a guidance council which formulates policies regarding the total guidance program. Why should teachers be represented on this council? Three illustrations will point to the need:

1. The budget for the school year is fixed. Employing a counselor will necessitate increasing class size for teachers because funds are not sufficient to employ both the counselor and a teacher who is needed because of higher enrollment. Teacher representatives on the council may decide in favor of the counselor, accept the extra numbers of students as part of a much needed program, and work with greater zeal in the community to gain more support for the school. If teachers have no voice in making the decision, they are likely to resent the counselor's coming into the system.

2. A counselor has three regularly scheduled interviews with each student per semester. The program is arranged to fit the counselor's very rigid time schedule. In many instances students miss classes to meet the counselor. Teachers have students out of class almost every day because of counseling interviews. Other students need more than three interviews. These students miss several class meetings. Assuredly, teachers need opportunity in committee with the counselor and administrator to prevent such occurrences or to be fully aware of the unavailability of them.

3. A principal, newly interested in a guidance program, assigns thirty to forty students to each teacher in a homeroom situation with instructions that the homeroom teacher is to carry out all guidance services including counseling. No provision is made to reduce the teacher's load of five regular classes, the homeroom, and sponsorship of a cocurricular activity. Decisions like these which vitally affect the work load and emotional health of the teacher should be shared with

teacher representatives on the guidance council. Teachers need to participate in all guidance committees because all aspects of the guidance program are related to their work in the classroom and in the school.

SPECIAL TEACHERS

Frequently the homeroom or core class teacher assumes major responsibility for helping students outline educational program, conducting the orientation program, administering group tests, analyzing occupational information, organizing the student council, and directing group activities dealing with problems of adjustment. In some instances individual counseling is also the responsibility of the teacher in the core class. When the teacher is assigned to or selected for these duties, he is responsible for doing a most effective job. Teachers having these duties should meet together and, with the administrator or counselor, outline the best program possible—one which is coordinated to be of most value to students.

Teachers of vocational and trade courses have unique functions related to the guidance program. Generally, their classes have large numbers of students who do not go to college. One of the main purposes for including specific vocational courses in the high school program is to meet the needs of students not going to college. So long as secondary education assumes responsibility for helping youth develop a salable skill through a program of vocational instruction in high school, teachers of the vocational courses need to be concerned not only with helping the student develop the skill but also with acquainting him with job opportunity in that field. Further, these teachers are expected to be more familiar than other teachers with techniques for helping students appraise their interests, aptitudes, and abilities in relation to vocations.

Teachers who have remedial classes in subject matter or classes for physically or mentally handicapped students also are in unique position to further an adequate program of guidance. These special teachers carry out their duties with students needing help not provided in the regular program of instruction and are therefore able to provide special services.

GUIDANCE ASPECTS OF REGULAR CLASSROOM INSTRUCTION

Teachers coöperate with those persons assigned specialized guidance duties and constantly work to improve their teaching practices to meet the needs of youth most effectively. At this point we take up the principal ways in which teachers may coöperate with individuals having specific responsibilities for guidance. If no guidance personnel are employed, teachers may carry out these functions themselves or in coöperation with the principal or an assistant.

Appraising the Individual Student. Accurate appraisal of the individual student is requisite both for teaching and for counseling. The counselor may assume major responsibility for gathering information outside the school or helping teachers gather it, while teachers secure information about students in regular classes. The teacher and counselor supply each other with information and teachers exchange information. Provision must be made for this information to be recorded and disseminated so that it is useful to all teachers concerned and to the counselor. There seems to be little justification for not supplying carbon copies of pertinent cumulative data to teachers in their classrooms. Either teachers themselves or teachers with assistance from the counselor should outline the types of information needed, methods for securing, recording, and disseminating it, and methods by which the pertinent parts will be used in acquainting the student with his own characteristics. All teachers should contribute information which leads to a better understanding of individual students.

Discovering General Aptitudes and Abilities. Each teacher helps his students to discover their aptitudes and abilities as part of regular classroom instruction. The teacher who has the student for a semester or year assuredly discovers strengths and weaknesses of the student. These facts are extremely valuable in helping the student plan his educational program and vocational career. Generally, teachers have been prone to use such information only for marking and not to help the student make a better adjustment or to modify the content, materials, and methods of instruction to meet the different kinds of aptitudes and levels of ability present in the class. Classroom methods and curriculum patterns which produce student maladjustment have contrib-

uted greatly to the increased need for counseling services. Helping students to understand their aptitudes and abilities and to plan with reference to them is an important contribution of classroom teachers to an effective guidance and educational program.

Disseminating Occupational Information. Most subjects include understandings and skills which have a relationship with career choice. Because adolescents become vitally interested in choosing a career during high school days, teachers should help them to discover the relationship between subjects and various careers. This is an excellent procedure for motivating classroom learning. Psychologically it is sound practice to help students discover how English, mathematics, science, and other subject skills are useful in many kinds of careers. Making field trips and conducting class discussion of the relationship between school work and later career are useful procedures in disseminating occupational information.

Teachers have a vital role in preparing for career day programs. The career day is a concentrated effort to help students, mainly juniors and seniors, in making important career decisions. A class discussion of the kinds of information which students should seek in questioning representatives from various vocational fields helps them profit from the career day program.

Referral. Teachers need to understand symptoms of maladjustment so that serious emotional disturbances are avoided in the classroom and so that students receive assistance when it is needed. When the teacher discovers a student with a serious problem and a counselor is available to help the student, the teacher should refer the student to the counselor. Not to refer him greatly impedes the operation of the counseling program.

Some teachers hesitate to send the disorderly student to a counselor because they feel that doing so reflects unfavorably upon their prestige and status. There is a strong tendency for teachers to interpret all disorderly conduct of students as a threat to their status. This kind of attitude is to be avoided. Recognizing that behavior is caused and that many causes of disorderly behavior originate outside the classroom, the teacher tries to discover why the student is disorderly, to work out a

program with the student for remedying conditions, and to refer those cases which cannot be handled satisfactorily to the counselor.

When no counselor is available for students with serious problems, the teacher assumes more responsibility for locating community referral agencies, sending students to such agencies, and working with the agencies in setting up remedial programs for the students.

How can you estimate the seriousness of an individual's maladjustment? Carefully analyze his behavior, attempt to see the problem from his point of view, and then work out a solution with him. This will help you analyze the number of areas in which he is maladjusted, learn how long the problem has existed, and diagnose the nature of symptoms exhibited.

Generally, the more areas involved the more serious is the problem. The girl who is in poor health, is failing in most school work, is frequently in trouble with classmates and teacher, rejects parents or is rejected by them, and dissipates leisure time in the community has many areas of maladjustment. Her problem is more serious than is that which centers in only one area, and she needs expert counseling more than does a person whose problem is in one area.

The longer the duration of the problem the more serious it is, and relatively more time or greater modification of the individual and his environment will be needed to solve it. The boy who has made very low marks in arithmetic throughout elementary and junior high school years has a more serious problem than does the one who has a good record until starting algebra at the beginning of the semester.

Intensity of maladjustment may be gauged through diagnosis of symptoms. Occasional daydreaming is normal; habitual daydreaming is serious. Being shy is normal; crying when asked to participate or completely withdrawing from classmates is abnormal. Occasional short, verbal outbursts of anger against classmates are normal; frequent physical attacks against classmates or temper tantrums are serious. Being concerned about tests is normal; nose bleeding, vomiting, and muscular tics are abnormal. The differentiation between normal and abnormal conduct for adolescents is not easily made because it depends in part on individual patterns of behavior already established.

One must know what the individual has already learned as normal ways of expressing himself. Through knowing the individual, one can diagnose symptoms to estimate intensity of maladjustment.

Counseling. Teachers guide students informally in everyday classroom situations and in out-of-class activities. The teacher in the core class may provide counsel for all students except those who are seriously maladjusted or who have exceptionally difficult problems in planning. A teacher who has regular classes and also regular hours for individual counseling is called a teacher-counselor. Prior to undertaking formal counseling responsibilities, the teacher should examine three important factors contributing to the success of counseling: (1) his own attitudes, understandings, and skills, (2) time and room arrangements, and (3) kinds and intensity of student problems which may be handled satisfactorily in counseling.

Generally, teachers are expected to find time outside of or during class to help students with problems which arise because of the content, materials, and methods of instruction in the particular class. It is the responsibility of the teacher to find time for helping students with adjustment problems which originate because of instructional methods or because of the nature of the class requirements in relation to the student's abilities. Other kinds of problems previously discussed under "Referral" might well be the province of a specialist but need not be when teachers have adequate time and requisite skill in counseling.

Should teachers attempt to counsel students from their own classes when for some reason the student's problem arises through dislike of the teacher or the subject? The answer is not definite except to this extent: The teacher should not counsel the student unless he is willing (1) to recognize the student's problem as a real one and important, (2) to accept a measure of responsibility for having produced the problem, and (3) to work out a solution acceptable to the student and the teacher. It should be clearly understood, however, that students are not to escape their responsibilities toward a particular class or teacher via the counselor. The counselor should not remove a student from a class without giving the teacher opportunity to solve the problem with the student. Equally important, teachers should try to

work out personal-social relationships and academic requirements in the classroom so that need for this type of counseling diminishes.

Creating Success Experiences. One success experience goes far in blunting the deteriorating effects of many failures. Our whole society is extremely success conscious, and achieving a measure of success is extremely important for normal personality development.

If teachers would make sure, first, that they show interest in and accept each student; second, that each student experiences a feeling of success in one phase of the academic work; and third, that the social climate within the classroom is such that each student has two or three good friends in the classroom, the need for individual counseling would be greatly minimized. If a student must be failed and prevented from achieving success in a particular class, the teacher should assume responsibility for helping him to see why he is failing, for getting him into a different program, or for helping him evolve better work skills and conduct. Each teacher undoubtedly can prevent an adolescent from being completely rejected or isolated when he accepts such a criterion as an important objective of classroom instruction.

To conclude, the teacher's role in guidance services is to do a most effective job in teaching and to utilize those services of specialists which can be provided efficiently. There is no basic difference between objectives of the instructional and guidance programs. The school organization and specific methods for achieving the objectives provide the key to delimiting the area of the teacher and the specialist in guidance. In schools where no specialized guidance services are organized, teachers have to allocate their time between instructional and guidance services.

SUMMARY

Increasingly, guidance services which supplement classroom instruction are being provided for high school students. Guidance specialists, who have professional education and experience somewhat different from teachers and administrators, coördinate the organization and execution of the guidance program. The chief purposes of guidance

services are to help students understand their problems, make better adjustment to school, home, and community life, and plan educational program and career more wisely. The organization of the school and specific methods for achieving these purposes delimit the responsibilities of the teacher and the specialist.

Six major areas of a guidance program are: (1) systematic appraisal of the individual student, (2) dissemination of occupational information, (3) counseling, (4) group guidance, (5) referral, and (6) research. Guidance specialists, administrators, and teachers are all concerned to some extent with each of these aspects of the program.

Classroom teachers have a vital role in securing and using information concerning the individual. This task is necessary to make classroom instruction effective. Also, teachers serve on guidance committees which formulate policies and practices. As leaders in the classroom, homeroom, or cocurricular activities, teachers (1) organize procedures to meet students' needs based on appraisal of the individual and the group, (2) discover general aptitudes and abilities of students, (3) disseminate occupational information related to their area of instruction, (4) refer some students to counselors or other agencies, (5) counsel some students, and (6) eliminate many personal adjustment problems through providing success experiences for students.

QUESTIONS AND ACTIVITIES

-
1. Discuss the relationship between instructional services and guidance services. How do the terms "guidance services" and "guiding youth" differ?
 2. What are six major guidance services in the modern high school? What factors determine which persons perform these services in the school?
 3. Discuss the extent to which teachers may need assistance in securing information about each student, recording it, and making it useful to students. Can these things be accomplished in the larger school without one person's assuming coordination of the whole program?
 4. Describe the essential features of an adequate program for helping students make a career choice wisely.

5. Discuss the major understandings, skills, and attitudes needed for effective individual counseling. With what kinds of problems do students frequently need help other than that which they receive in the regular classroom program of instruction? What arrangements related to teaching load, time, and space must be made if the teacher assumes counseling responsibilities for thirty to fifty students?
6. Make a list of the group guidance activities for which teachers should assume major responsibility. How should these be coordinated within a school and within a school system?
7. Describe situations in which students should be referred to out-of-school agencies.
8. Why should teachers serve as members of the guidance council or guidance committee within a school? Within a school system?
9. What is the role of special teachers with reference to instruction? To guidance services? What are the duties of a teacher-counselor?
10. Explain the role of each teacher as it bears on (a) informal guidance, (b) understanding each student, (c) securing, recording, and using appraisal information, (d) counseling, (e) disseminating occupational information, (f) referral, and (g) creating success experiences for students in the class.
11. Secure information by visiting schools or reading written accounts in which (a) teachers assume major responsibilities for individual counseling, with no full-time counselor employed by the school, and (b) counselors are hired who do no teaching. Which of the two plans do you favor? Why?

REFERENCES

- Billings, Mildred L., *Group Methods of Studying Occupations*, Scranton, International Textbook Company, 1941.
- Commission on Teacher Education, *Helping Teachers Understand Children*, Washington, American Council on Education, 1945.
- Darley, John G., *Testing and Counseling in the High School Guidance Program*, Chicago, Science Research Associates, 1945.
- Dillon, Harold J., *Work-Experience in Secondary Education*, New York, National Child Labor Committee, Publication 394, 1946.
- Dunsmoor, Clarence C., and Miller, Leonard M., *Principles and Methods*

- of *Guidance for Teachers*, Scranton, International Textbook Company, 1949.
- Erickson, Clifford E., *The Counseling Interview*, New York, Prentice-Hall, Inc., 1950.
- Forrester, Gertrude, *Methods of Vocational Guidance*, Boston, D. C. Heath and Company, 1944.
- Froelich, Clifford P., *Guidance Services in Smaller Schools*, New York, McGraw-Hill Book Company, 1950.
- Hamrin, Shirley A., *Guidance Talks to Teachers*, Bloomington, McKnight and McKnight, 1947.
- Hoppock, Robert, *Group Guidance*, New York, McGraw-Hill Book Company, 1949.
- McKown, Harry C., *Home Room Guidance*, New York, McGraw-Hill Book Company, 1946.
- Mathewson, Robert H., *Guidance Policy and Practice*, New York, Harper & Brothers, 1949.
- Super, Donald E., *Appraising Vocational Fitness*, New York, Harper & Brothers, 1949.
- Traxler, Arthur E., *Techniques of Guidance*, New York, Harper & Brothers, 1945.
- Warters, Jane, *High School Personnel Work Today*, New York, McGraw-Hill Book Company, 1946.
- Williamson, E. G., *Counseling Adolescents*, New York, McGraw-Hill Book Company, 1950.
- Wood, Ben D., and Haefner, Ralph, *Measuring and Guiding Individual Growth*, New York, Silver Burdett Company, 1948.
- Wright, Barbara H., *Practical Handbook for Group Guidance*, Chicago, Science Research Associates, 1949.

CHAPTER 15

.....

Evaluation and Classroom Instruction

The relatedness of evaluation and classroom instruction was established in the discussion of planning in Chapter 6 in this way: First, objectives stated in behavioral terms as understandings, skills, and attitudes are formulated. Second, activities to achieve the objectives are organized. Third, kinds of student behaviors indicative of growth in understandings, skills, and attitudes are identified. Fourth, instruments such as standardized and teacher-made tests and informal evaluation procedures are used to secure data concerning progress in learning. Fifth, these data are interpreted, in part by the teacher and in part by the students. Gathering and interpreting data help the teacher appraise the validity of objectives, the extent to which they are being achieved, and the relative values of the learning activities in achieving them. Since students share in evaluation, the data are useful to students for measuring progress, appraising their strengths and weaknesses, and planning more intelligently. A comprehensive evaluation program within the whole school provides the necessary information for improving the school program.

To make more clear the essentials of an evaluation program and specific procedures in evaluation, problems are investigated in this order: first, the essential features of evaluation; second, standardized tests in evaluation; third, teacher-made tests; fourth, informal evaluation techniques; and fifth, interpreting test scores and other data with statistical measures.

ESSENTIAL FEATURES OF AN EVALUATION PROGRAM

An evaluation program is organized to appraise amount and quality or value. Thus evaluation includes all the tools and techniques of measurement which are useful in ascertaining amount and value or quality. In appraising student growth in Latin vocabulary, for example, evaluation is concerned with both the amount of vocabulary gained and the value of it to the student. In evaluating a theme, we are concerned with correctness of English used and with the quality of the ideas expressed. Since all high school students are to profit from attending classes, we use evaluation techniques to discover how well they are learning and of what value it is to them.

EVALUATION IS RELATED TO OBJECTIVES

Evaluation is concerned with appraising growth toward specific objectives—objectives which lead to progressively higher levels of understandings, skills, and attitudes as students learn. In a well-organized program of instruction, school, teacher, and student objectives are in close harmony although they are stated in quite different terminology. These objectives guide the selection and use of evaluation procedures.

Every class should contribute to student growth in understandings, skills, and attitudes. Each teacher needs to establish the extent toward which learning activities will be directed toward achieving objectives derived from an area of subject matter compared with more comprehensive objectives not directly related to subject matter. In a unit on labor in a United States history class, three major objectives derived from the subject area might be stated thus: The student (1) understands the problems of labor in modern life, (2) builds skill in analyzing these problems, and (3) establishes an unbiased attitude toward the problems. With more comprehensive objectives which might be sought the student would (1) understand how problems of labor affect his own economic status, (2) build social skills in adjusting to classmates and teacher, and (3) exhibit a friendly attitude toward classmates. Because the school has assumed increasing responsibility for guiding not only the intellectual but also the physical, social, emo-

tional, and moral aspects of adolescent growth, objectives should include more of these less tangible but highly important growth factors, and evaluation procedures should be developed to appraise growth toward them.

TEACHING AND LEARNING REQUIRE CONTINUOUS EVALUATION

For the teacher to ascertain progress of students, it is necessary to know the point at which they are at the beginning. To evaluate growth in social skills, we might administer a sociometric test to discover where students are now and then administer one later to discover what changes have occurred. Discovering where students are at the beginning helps in diagnosing strengths and weaknesses so that learning activities may be organized more effectively to accommodate the patterns found. The teacher in the tenth-grade general science class assuredly wants to know where each student is in achievement in order to organize the best kinds of activities and most efficient use of materials to suit the achievement levels discovered. As the learning activities proceed, frequent evaluation of student progress is necessary for the teacher to learn characteristics of the learning situation which may be impeding or facilitating progress. Unless the teacher knows how student learning is proceeding, the effectiveness of the teaching cannot be appraised.

Making progress toward goals is a most powerful motivating force in purposeful learning. For student interest to continue in any kind of activity, knowledge of progress is necessary so that success feelings are engendered. Usually the teacher needs to assist students in measuring progress because of their immaturity and lack of skill for doing so. Part of the information secured to discover where students are must be available to students so that they, too, are aware of the starting point. Teacher-made tests may help students measure their progress when such tests are carefully planned and the scores are properly interpreted to students. Conferences between the teacher and students wherein they examine their progress may be employed along with keeping individual charts, making scrapbooks, keeping notebooks, conducting self-evaluations toward objectives, and the like. Learning proceeds more evenly and rapidly when students know where they are

and evaluate their own progress toward objectives which they want to reach. Evaluation takes into account this important characteristic of purposeful learning.

EVALUATION REQUIRES COÖPERATION BETWEEN TEACHER AND STUDENTS

When both the student and the teacher are to ascertain progress toward objectives, it is apparent that they need to share in identifying objectives, in collecting and interpreting evidence, and in making use of the evidence. By the time students finish high school, we expect them to follow these procedures in managing their life affairs, so we should provide opportunities leading to this important phase of living when we have the chance to guide it intelligently. When we give the student these opportunities, besides encouraging continuing interest and purposeful activity, we broaden the basis on which to evaluate in that we observe the student's method of self-appraisal.

It is the teacher's responsibility to determine the extent to which the students share in gathering, interpreting, and using evidence. Data obtained from student diaries or logs, problem check lists, interest blanks, intelligence tests, achievement tests, and sociometric tests usually should not be interpreted to students in groups; rather interpretation must be carried out individually with the student. Depending on the particular case, it may be unwise to present certain information to the individual. In areas directly related to the progress of learning, it appears desirable for the teacher to encourage students to share in all phases of the evaluation and for the teacher to interpret data obtained through tests to students so that they discover strengths and weaknesses and use such information for self-improvement.

EVALUATION FOCUSES ON GROWTH IN RELATION TO ABILITY

A general objective of secondary education is that engaging in classroom activities is to be of value to each student in making reasonable progress in line with his abilities. We know that students mature physically and mentally at different rates, that differences in previous educational experiences lead to wide differences in achievement, and that individuals vary widely in aptitude for different kinds of learning

such as manual, verbal, and artistic. Unfortunately, in many learning areas we do not have accurate standards which identify the amount of progress individuals with given abilities, aptitudes, and achievement make during a given length of time. Therefore, comparisons with classmates are sometimes necessary to estimate ability and progress in relation to it.

Standardized achievement test scores may be used to ascertain growth of individuals in relation to their tested abilities when the same test or an alternate form is repeated. To use standardized tests for this purpose, the objectives of instruction must be directed to achieving results measured by the test. Also, each individual's second score must be compared with the first. The same procedure applies to teacher-made tests.

It may help the individual student to find his location on a test in comparison with others in the class. It will help him much more to discover ways through which his own progress may be enhanced in relation to his own ability, and evaluation is directed toward this end.

EVALUATION REQUIRES QUALITATIVE ANALYSIS

Most of us have received or have seen report cards which had a deportment mark with entries in the form of letter grades or percentages. This was an attempt to measure and report a quality which is not readily subject to objective measurement. The meaning of the mark in deportment was dependent upon a comparison with other marks and was probably significant only to the teacher assigning the mark. A student might have received a *C* because he was tardy, because he refused to carry out a teacher command, because he ran down the steps, or because he did not do his work carefully. The single deportment mark did not indicate the quality of his behavior in a meaningful way. The present tendency is to use descriptive comments to indicate growth in the less tangible kinds of behavior.

Part of the competence of teaching rests in making value judgments concerning what the objectives of instruction should be, in helping the student to formulate his objectives, and in appraising the adequacy of a given student performance—writing a theme, painting

a picture, or conducting himself graciously in the classroom. Qualities like these are not readily measured with any kind of objective test but require judgments. Judgments of this kind are made daily by the student and teacher and are an important aspect of evaluation.

A most important feature of qualitative evaluation is that the student be helped to establish standards by which to appraise his own performance and conduct. It is of much greater significance that the student be able to judge the quality of his own performance than that the teacher summarize his performance in a single mark or short, descriptive comment.

EVALUATION IS BASIC IN CURRICULUM IMPROVEMENT

The effectiveness of a total school program rests upon the progress students make toward achieving socially valid objectives. Objective kinds of evidence and value judgments are used in determining effectiveness of the curriculum. If the total school program is organized to help students make satisfactory progress with their developmental tasks, then growth toward such objectives needs to be appraised. If the Ten Imperative Needs of Youth constitute the school's goals, then evaluation must include measures to determine the degree to which these needs are met and the value of the various experiences organized in the school to achieve these objectives.

To be valid, the evaluation of a total school program needs to be comprehensive. Appraisal of students' needs, of their progress through school, of their progress outside school to some extent, and a follow-up after leaving school are required. Some kinds of evaluative programs in which judgments are made concerning the effectiveness of the curriculum without sufficient comprehensiveness and objectivity include those in which (1) studies are made only of students who go to college, (2) only those who remain in school to graduate are studied, (3) student progress in subject achievement only is discovered and conclusions are drawn on comparisons with national norms, and (4) the cocurricular programs such as athletics, music, and art become the chief criteria of the school's effectiveness. All of these taken together provide useful evidence, but each separately is too narrow to indicate the effectiveness of the total curriculum.

EVALUATION REQUIRES USE OF VARIED TECHNIQUES AND INSTRUMENTS

After objectives are formulated and learning activities are organized to achieve them, evaluation requires use of a variety of techniques and instruments. The major techniques include discovering where the student is at the beginning; keeping records of progress as the learning proceeds; using appraisal methods to discover the student's abilities, aptitudes, interests, plans, problems, etc.; devising methods for accurate interpretation of data by students and teacher; and formulating methods of record keeping which will accurately summarize progress over the school life of the student.

The best appraisal and measurement instruments available should be used. Standardized tests of achievement, intelligence, aptitude, personality, and vocational interest yield valuable data to help understand each student's developmental pattern. Teacher-made tests may be used to appraise progress in learning directly related to course objectives. Informal evaluation procedures such as case studies, anecdotal records, sociometric tests, questionnaires, rating scales, check lists, conferences with the student, conferences with groups of students, and case conferences which may include parents often are used to appraise qualities and values. The best evaluation by teachers uses some of the techniques and instruments from each group. No teacher uses all of them. Details concerning these tools and procedures are presented in later sections of this chapter.

EVALUATION PROVIDES NECESSARY INFORMATION FOR MARKING

A marking or reporting system is necessary to inform parents of a student's progress, to maintain summary evidence of the student's work in school, to maintain summary information for guidance purposes, and to meet administrative needs in making decisions concerning promotions, graduation requirements, recommendations, and the like. So long as we maintain the usual curriculum pattern of a given number of hours in attendance to earn a high school credit and so long as courses are organized in one-hour periods or multiples thereof, brief summary marks are required.

An adequate marking system should include for each student an indication of comparative achievement in subject understandings and skills, an indication of achievement in subject understandings and skills in relation to ability, and an indication of progress in the more intangible areas of growth: attitudes, work methods, social relationships, and emotional expression. Whether the first of these should be reported to parents is debatable. In some schools only the latter two are reported.

These eight essential features of evaluation indicate that it is far more comprehensive than measurement. Measurement, however, is an important aspect of evaluation. The best measuring instruments are standardized. As you examine abbreviated descriptions of standardized tests which follow, note what is being measured and how skilled test makers construct test items.

STANDARDIZED TESTS IN EVALUATION

The use of appropriate standardized tests is a prominent phase of evaluation. A standardized achievement test in algebra, for example, may provide evidence concerning the relative effectiveness of two different methods of teaching. Also, it may tell how each student is doing compared with other students in the class, in the school, and in the country. Standardized tests may be used to help students measure progress during a given length of time and secure self-appraisal information.

CHARACTERISTICS OF STANDARDIZED TESTS

A standardized test has four distinguishing characteristics. First, items have been carefully selected so that they measure what the test is supposed to measure. This feature is called test validity. Usually several experts have coöperated in building the test and have carried out comprehensive experimental and statistical procedures to appraise its validity. Thus, in an arithmetic achievement test the items have been selected on the basis of what is usually taught in arithmetic at the various grades in representative schools throughout the nation.

Reliability of the test has also been established; that is, the scores made by individuals on the test are accurate so far as the test itself is concerned. If the test were completely reliable and two comparable

forms of it were administered to thirty students without their having had opportunity to improve performance between test administrations, each student's score on the second administration would be exactly the same as on the first. The best tests have some error in measurement; therefore, reliability coefficients of 1.00 are relatively impossible. Many achievement tests have reliability coefficients above .90, which figure means that each individual's score on the test places him quite accurately in relation to others.

A second feature of standardized tests is that the method of administration is standardized; that is, definite instructions for administering the test, including exact words to be used in giving instructions; time to be allowed for completion; and the role of the tester in helping students are clearly indicated.

A third feature of standardized tests is that scoring has been standardized. Keys for scoring and rules for deciding correct and incorrect answers are outlined. Test makers have created ingenious devices in making answer sheets and keys which facilitate both accurate and quick scoring. When two testers follow instructions and make no errors in scoring, they get identical scores. Thus, if two teachers scored the same set of forty answer sheets, the resulting scores would be identical.

Finally, interpretation of scores is either totally or partially standardized. National norms have been established whereby each individual's score may be interpreted in terms of a grade-placement equivalent, age equivalent, percentile, or some other form of derived score. Raw scores made on standardized tests are meaningless until interpretation is made.

KIND AND NUMBER OF STANDARDIZED TESTS

A most comprehensive survey of published tests, most of which are standardized, appears in successive editions of the *Mental Measurements Yearbook*. In *The Third Mental Measurements Yearbook* the editor states the hope that "this project will receive sufficient support to publish a *Mental Measurements Yearbook* every two or three years."¹ In this yearbook, the attempt was made to list all commercially available tests—educational, psychological, and vocational—

¹ Oscar K. Buros (ed.), *The Third Mental Measurements Yearbook*, New Brunswick, Rutgers University Press, 1949.

published as separates in English-speaking countries between October, 1940, and December, 1947. Also, some tests produced 1933-39 are included, making a total of over 663 tests which are listed and reviewed. Each new volume is to supplement the previous volumes.

Achievement Batteries. Tests have been standardized to measure important areas of school achievement, usually subject achievement. The battery may be in a graded series and administered at different grade levels, through adult, thus providing a continuous record of growth in school achievement.

To give you a better concept of the identifying data available in *The Third Mental Measurements Yearbook* for twenty-two different achievement batteries, that which identifies the Progressive Achievement Tests is reproduced:

Progressive Achievement Tests, 1943 Edition

Grades 1-3, 4-6, 7-9, 9-13; 1933-43; 4 levels; the tests in reading, arithmetic, and language are available as separates in both hand-scoring and machine-scorable editions; 35¢ per specimen set at any one level, postpaid; Ernest W. Tieg and Willis W. Clark; California Test Bureau.

- (a) Primary Battery. Grades 1-3; 1933-43; Forms A, B, C; \$1.75 per 25; 95 (110) minutes.
- (b) Elementary Battery. Grades 4-6; 1933-43; Forms A, B, C; \$1.90 per set of 25; 120 (135) minutes.
- (c) Intermediate Battery. Grades 7-9; 1933-43; Forms A, B, C; \$1.90 per set of 25; 150 (165) minutes.
- (d) Advanced Battery. Grades 9-13; 1934-43; Forms A, B; \$1.90 per set of 25; 150 (165) minutes.²

The Advanced Battery, Form A, consists of five subtests which are subdivided thus: Reading Vocabulary, Reading Comprehension, Mathematical Reasoning, Math Fundamentals, and Language.³

Here are items from the test. As you read the items from this and other tests discussed, evaluate them from the standpoint of conciseness and clarity of expression, decide what is being measured by each item, and classify each item according to type—multiple choice, recall, alternate choice, etc.:

² *Ibid.*, p. 29.

³ Ernest W. Tieg and Willis W. Clark, *Progressive Achievement Tests*, Los Angeles, California Test Bureau, 1943.

DIRECTIONS: Underline the word which means the same or nearly the same as the first word, and write its number on the line to the right.

graph (1) motive (2) diagram (3) bucket (4) synthesis _____

apparatus (1) filament (2) mechanism (3) quadrant (4) synchronism _____

minister (1) teacher (2) proctor (3) pastor (4) interval _____

plot (1) plan (2) plenty (3) farce (4) episode _____

DIRECTIONS: Draw a line under the largest number in each row and write it on the line to the right.

2/3 5/8 3/4 4/9 _____

2 50% .42 1.19 _____

DIRECTIONS: Work these problems. Write the answer on the line to the right.

A swimming tank is 15 ft. wide, 50 ft. long, and has an average depth of 5 ft. How many cubic ft. of water will it hold? _____

A house valued at \$8000 was insured for 80% of its value. The rate of insurance was 24 cents per \$100.00. What was the amount of the premium? _____

DIRECTIONS: Draw a line under the correct word and write its number on the line to the right.

(¹ Isn't, ² Aren't) the baskets filled with flowers? _____

I approve of (¹ his, ² him) going. _____

The Progressive Achievement Tests are typical of many achievement batteries. The battery surveys achievement in various subject fields taught in most schools. Norms are established for each subtest by which raw scores may be converted into derived scores. Further, these subtest scores are plotted on a graph to yield a profile of achievement. Thus, strengths and weaknesses according to subtest scores may be appraised. For further diagnosis of an individual's achievement, test items related to specific parts of each subtest are enumerated in the accompanying manual.

Each achievement battery has its own special characteristics. To select a battery, one should consider what the test measures in relation to the school and course objectives, also the validity of the test, its reliability, extent of sample population on which norms have been

established, time required for administration, ease of scoring, ease of converting raw score into derived score, and cost. One should always be aware that when a school attempts to get students to score high on a particular achievement battery, the tendency is to load the curriculum with classes and teaching procedures directed toward that end.

Character and Personality Tests. The California Test of Personality, a personality inventory, was discussed as a tool of individual appraisal in the previous chapter. Another interesting and useful instrument in appraising the individual student is the Mooney Problems Check List.⁴ It is one of many instruments currently available for measuring aspects of character and personality.

The Check List has forms for junior high school, high school, and college. The form for high school has eleven general areas: (1) health and physical development; (2) finances, living conditions, and employment; (3) social and recreational activities; (4) social-psychological relations; (5) personal-psychological relations; (6) courtship, sex, and marriage; (7) home and family; (8) morals and religion; (9) adjustment to school work; (10) the future: vocational and educational; and (11) curriculum and teaching. In each of these areas the student responds to the thirty statements by checking those which he recognizes as problems for him and then encircling those which are most troublesome. The total number of problem statements is 330. Administered properly to a class, the Check List provides the teacher with a summary of problems which students consider troublesome and also identifies those individuals who check many problems. Administered to a whole school, it provides a survey of student problems in school. In individual counseling, it helps the counselor and the student locate specific problems which may be fruitful for discussion.

Intelligence Tests. Intelligence tests may be administered individually or to groups. The Revised Stanford-Binet Scale, discussed in the previous chapter, is the most widely used individual test. In most high schools, group tests are used. Representative of many group verbal tests which include tests for use in kindergarten to adult levels are the Pintner General Ability Tests.⁵

⁴ Ross L. Mooney, *Problems Check List*, Columbus, Ohio State University Press, 1941.

⁵ Rudolf Pintner, Bess V. Cunningham, and Walter Durost, *Pintner General Ability Tests: Verbal Series*, Yonkers, World Book Company, 1938.

Here are items, one from each of the eight subtests of the Advanced Tests, Form A, 1938; instructions to the subtests are not stated here as in test booklets.

Vocabulary: Select the word which means the same as the first: quiet—

- (1) spite (2) require (3) rid (4) silence (5) noisy

Logical selection: Select the word most logically related to the first:

- A bird always has or implies—(1) song (2) feathers (3) flight (4) cage (5) summer

Number sequence: Select the number which follows next in sequence:

- 9 12 15 18 21 24—(a) 27 (b) 30 (c) 33 (d) 26 (e) 37

Best answer: Which means nearly the same as "A stitch in time saves nine?"

- (1) A penny saved is a penny earned.
(2) One stitch is less expensive than nine stitches.
(3) Great people save time.
(4) Saving should take place only at a certain time.
(5) An ounce of prevention is worth a pound of cure.

Classification: Identify the word which does not belong with the others:

- (1) banjo (2) bagpipe (3) guitar (4) mandolin (5) violin

Opposites: Select the word which means the opposite of the first:

- diminish—(1) skirmish (2) protract (3) deduct (4) increase (5) reduce

Analogies: Select the word which establishes the same relationship with the third as that established in the first two:

- memory-recollection: forgery—(1) gross (2) cruelty (3) selfishness
(4) negation (5) falsification

Arithmetic reasoning: Select the correct answer:

When I apply a weight of 1 pound to a pressure gauge, it registers one bubble. When I apply 2 pounds, it registers 4 bubbles. When I apply 4 pounds, it registers sixteen bubbles. In all probability what will be the number of bubbles registered if I should apply six pounds?

- (a) 36 (b) 64 (c) 22 (d) 96 (e) 28

In reviewing the material presented about the Pintner Tests, consider these questions: (1) Do the items measure intelligence? (2) Do they measure the same kind of abilities as does the Revised Stanford-Binet Scale? (3) What advantages are there in using a series of tests which carries through from kindergarten to adult levels?

Achievement, Diagnostic, and Aptitude Tests. Many standardized

tests are available in separate subjects and broad fields. Some of these tests are designed primarily to survey extent of achievement; others include diagnostic features. Some attempt to measure degree of aptitude in a particular area or subject; others measure achievement not directly related to subject understandings and skills. It should be noted that all tests measure the student's performance at the time of testing. On the basis of this performance, the score obtained may be a measure of achievement or aptitude. In turn it may have value in diagnosis or prognosis. Thus, a general achievement test, administered in the twelfth grade, may be an excellent aptitude test for college entrance.

Test B, Work-Study Skills, Iowa Every-Pupil Tests of Basic Skills⁶ is an achievement test which incorporates a diagnostic feature. It is designed to measure skill in map reading, use of references, use of index, use of dictionary, and reading graphs, charts, and tables.

Map Reading is in three sections. Ten different maps are used; they appear quite similar to black-and-white maps in school texts. In each case the factual information needed to answer the forty items in the test is provided. For example, the subject examines a map and decides whether one, two, three, or four states receive more than eighty inches of rainfall annually.

The twenty multiple-choice items in Use of References require that the subject know where to get specific information; no clues are given as in Map Reading. Thus, the subject from his own knowledge must choose where to locate specific information as in the question:

Where is Croatia?

- (1) an encyclopedia (2) an atlas (3) Inside Asia
- (4) National Geographic Magazine

The Use of Index Test provides a sample index, and in each of twenty-two items one correct answer is called for, as:

On what page does a discussion of consumer problems begin?

The Use of Dictionary Test presents a sample dictionary which provides the basic information in answering twenty-five multiple-choice items such as:

⁶ H. F. Spitzer, Ernest Horn, Maude McBroom, H. A. Greene, and E. F. Lindquist, *Iowa Every-Pupil Tests of Basic Skills*, Boston, Houghton Mifflin Company, 1941.

Which of the following is correct?

- (1) Gilamonster (2) gilamonster (3) Gila monster (4) Gila-monster

The test on Reading Graphs, Charts, and Tables includes eight black-and-white reproductions which, if correctly interpreted, yield answers to twenty-seven multiple-choice items such as:

In what year was most merchandise exported from the United States?

- (1) 1938 (2) 1933 (3) 1930 (4) 1929

J. Wayne Wrightstone, reviewing this test, had general commendation for it with two exceptions: the subtest scores are not sufficiently reliable for diagnosis of individual pupil achievement, and the norms do not include a sufficiently broad sample of the national population. His concluding statement was: "Teachers and supervisors generally have accepted the Work-Study Skills Test as the most significant contribution of the Iowa Every-Pupil Test batteries. In the modern classroom the newer work-study skills are assuming a position of equality with the more established skills in reading, arithmetic, and language arts."⁷

To conclude the discussion of standardized tests, these facts should be established: Tests in given areas were examined in some detail in this and the previous chapter to illustrate instruments which are available for gathering evaluative evidence. No attempt was made to explore all standardized tests or to recommend any specific test. Your author would like to express two opinions at this time. First, carefully selected and intelligently used standardized tests provide useful evidence and are an important part of any evaluation program; and second, one of the best means to improve one's ability in test construction is through careful study of standardized tests, accompanying manuals, and critical reviews of tests.

TEACHER-MADE TESTS IN EVALUATION

In constructing tests for classroom use, teachers are concerned with four general characteristics of tests: (1) Purpose: What do I want

⁷ Buros, *op. cit.*, p. 571.

to appraise in terms of the objectives of instruction? (2) Validity: How can I make test items which measure what they are supposed to? (3) Reliability: How can the test be constructed and scored so that it measures accurately? (4) Usability: Can it be easily administered and scored, and can the results be readily interpreted?

Many kinds of tests are constructed and used by teachers, especially tests to measure achievement of subject facts, understandings, and skills. Teacher-made tests may be grouped into two broad categories: essay and objective. Essay tests vary in length of answers from very long to one short paragraph. Frequently used objective test items include completion; alternate-choice, such as true-false, yes-no, same-opposite, and other variations; multiple-choice; and matching.

ESSAY TESTS

Essay tests may be used to appraise the student's ability to express himself clearly in written form, his ability to recall and organize relatively large amounts of material, and his ability to evaluate critically. If one wants to achieve all three purposes with one test item, then marking must take into account all three factors. For example, the item "Evaluate the strengths and weaknesses of standardized tests" might be marked on the basis of how clearly the student expressed himself in written form, how many and how well facts were brought to bear on the question, and how critical his evaluation was. If only one mark were to be given to the answer, one would have to decide how much weight to give each aspect. This is a difficult decision to make. It is perhaps wise to construct separate items to achieve each of these purposes; however, doing so often tends to destroy the usefulness of test items. In other words, if one made many short-answer items, the marking would be more reliable, but one would lose part of what he intended to measure.

Ability to Express Self Clearly. Return to the first step in test construction: "What do I want to appraise in terms of the objectives of instruction?" In what courses is ability to express oneself clearly in written form an important objective? In classes in creative writing, English composition, journalism, and business English it undoubtedly is an important objective. A teacher might want to use an essay test in

summary evaluation or in diagnosis to appraise the extent to which students exhibit this ability. Items which serve the purpose might be:

Outline the plot of *As You Like It*.

Write a theme on the topic

Discuss the importance of form in business letters.

Summarize the important guides in writing a news story.

Recall and Organization. An essay test may be constructed to appraise the student's ability to recall a relatively large amount of material and to organize it into a meaningful pattern. In social studies, science, and literature, developing this ability may be an important objective of instruction. Here are samples of recall questions, which are frequently called essay questions:

What are the provisions of the Eighteenth Amendment?

What nations are members of the United Nations?

List the Presidents of the U.S. since 1860.

In these items, marking is fairly simple, but the items do not measure ability to organize facts except at a very low level.

Questions to appraise organizational ability need to be more general and might follow this pattern:

How did our tariff policies change from 1920 to 1940?

Discuss the growth of organized labor since 1880.

Describe how a federal revenue bill becomes enacted into law.

These questions require both recall and a degree of organization. They require longer answers and a higher level of organization than do the items in the first group, and they are more difficult to mark objectively.

Critical Evaluation. In many courses we want to develop ability of students to evaluate critically. To some extent this ability may be appraised with essay tests. Items which measure ability to evaluate critically frequently begin with "Why," "Compare," "Contrast," or otherwise imply critical evaluation, as:

Why were the Articles of Confederation unsatisfactory?

Compare the tariff policies of the Republican and Democratic parties, 1888-1948.

Contrast the editorials of the *Chicago Tribune* and the *New York Times*. Why does organized labor oppose the Taft-Hartley Labor Act?

The emphasis in these questions is upon relationships, application of facts to broader problems, and evaluation of facts and relationships.

Strengths of essay tests are that they may be used for appraising the student's ability to express himself in written form, to organize large amounts of material into meaningful patterns, and to evaluate critically. Also, students may develop better study methods to prepare for taking an essay test than they do when preparing for objective tests.

Weaknesses of essay tests are also observable. Essay tests have low validity because they do not sample a sufficiently comprehensive area. There appears to be no way to correct for quality of handwriting and English usage, which inevitably affect the tester's estimate of what is being measured. Essay tests are also low in reliability, in part because only a few items may be answered during a given time and also because subjectivity enters into marking. Higher validity and reliability may be attained when teachers construct items carefully, define the criteria on which marks are based, and compare marks with one another. Essay examinations are more time consuming than objective tests from the standpoint of administration and marking. More time of the students is required for writing an essay test, and much more time is needed by the teacher for scoring. The strengths and weaknesses of essay tests are more apparent as objective tests are discussed in more detail.

OBJECTIVE TESTS

In examining standardized tests, you noted that many types of items are used and that there are variations of types. Regardless of the type of item used, standardized test items are usually excellent in English usage, clarity of statement, and conciseness. The fewest words possible are used; yet no confusion is created in deciding the correct answer because of irrelevant or ambiguous phrases; "trick" questions are avoided. Further, standardized tests measure a variety of abilities, are readily administered and scored, and usually have high validity and reliability.

Constructing valid and reliable objective tests is difficult and demands considerable experimentation. In discussing four types of objective test items—completion, alternate-choice, multiple-choice, and matching—points to watch for in construction are indicated.

Completion Tests. Completion tests are those in which words or phrases have been omitted in sentences; the student is to fill in the omitted word or phrase. This kind of test may measure ability to recall or to perceive relationships. Here is a sample of each:

Standardized tests usually have higher _____, _____, and _____ than do essay tests.

An achievement test administered near the end of the 12th grade is a good _____ test for college entrance.

Following are examples of poorly constructed completion items. How could each be improved?

A _____ test score is meaningless until converted into a derived score.

The _____ Test measures intelligence.

_____ tests may be grouped into categories: _____.

You probably agree that in the first item, the use of the article "A" gives a clue to the answer; the second is too vague and indefinite because any one of several answers is correct; and the third has so many missing words that it is impossible to tell what is wanted.

To facilitate scoring of completion tests, consecutive numbers may be placed in the blanks, with instructions that the answers be placed in the left margin corresponding to the numbers.

Alternate-Choice Tests. An alternate-choice test item requires that the student choose one of two answers. Samples follow:

True-false:

Evaluation is more comprehensive than measurement.

Discovering relative position of students in the class is a primary purpose of evaluation.

Yes-No:

Are all tests reported in *The Third Mental Measurements Yearbook* standardized?

Choice of correct answer:

The revised Stanford-Binet Scale is administered (1) individually, (2) to groups.

The Kuder Preference Record measures (1) interest, (2) aptitude.

Investigate these true-false items to discover poor construction:

Standardized tests scarcely ever have reliability coefficients of 1.00.

Essay tests should not be used infrequently in any course.

Aptitude and ability are synonymous.

The title of Chapter 2 in this book is: "The Nature of Adolescents."

You probably agree that "scarcely ever" is vague; "not infrequently" makes the second difficult if not impossible to answer; aptitude and ability usually have different meanings but may not always, depending upon the context in which they are used; and the last item demands recall of specific words from the text—also, it could readily be a "trick" question because it is correct except that "Adolescents" is incorrect spelling.

Some strengths of alternate-choice tests are that they may be adapted to testing in many classes; a great deal of material may be tested in a short time; and they are easily scored. In testing achievement, weaknesses of alternate-choice tests are apparent. First, guessing is encouraged; second, the learner is presented with a wrong response; third, it is extremely difficult to construct alternate-choice items which are always true or always false. When part of the items in the test are usually true and others are always true, the student is faced with the problem of deciding whether a usually true item should be marked true or false.

Multiple-Choice Tests. In samples from standardized tests, multiple-choice items were reproduced in which the student had to select one of three, four, or five choices as correct or better than others. This type of item is used widely in standardized achievement tests because it is adaptable to many purposes and is useful in appraising understanding, discrimination, and judgment.

Note where multiple-choice items were used in the standardized tests. In the Progressive Achievement Tests, multiple-choice items were used in testing reading vocabulary, reading comprehension, mathematical reasoning, and grammar. Test B, Work-Study Skills, used multiple-choice items in map reading, use of references, use of diction-

ary, and reading graphs, charts, and tables. The Advanced Test of the Pintner General Ability Tests employed multiple-choice items throughout. In this test, items dealing with vocabulary included synonyms, logical selection, classification, opposites, and analogies. Achievement tests in science frequently use multiple-choice items to appraise ability to perceive cause and effect.

Multiple-choice items are more difficult to construct than are alternate-choice. Here are some general suggestions which may be of value in making multiple-choice tests:

1. Make the wording of the items clear, avoiding English-usage errors as pointed out for alternate-choice.

2. Avoid clues to correct choice. Do not make the correct choice longer or shorter or grammatically different, or have it include the same words as appear in the introductory question or incomplete statement. In the whole test distribute correct answers among all choices.

3. In testing judgment and discrimination, make all choices plausible; one of them, however, must be the best choice. If four choices include two which are not closely related or are easily identified as wrong, the student eliminates these two and simply chooses between two as in the alternate-choice item. Elimination of the two easily identified as incorrect requires only a very low level of discrimination.

4. Present enough information in choices so that cause, effect, or judgment are clearly stated. Frequently, one-word choices are insufficient for this purpose because the one word must be so different to be correct that others are easily eliminated. This item previously quoted from the Pintner General Ability Tests illustrates the point as well as the suggestion for making all choices plausible:

Which means nearly the same as "A stitch in time saves nine?"

1. A penny saved is a penny earned.
2. One stitch is less expensive than nine stitches.
3. Great people save time.
4. Saving should take place only at a certain time.
5. An ounce of prevention is worth a pound of cure.

5. Provide for easy scoring. Most high school students are capable of using answer sheets for the whole test. If no answer sheet has been made, make a definite space for each answer to be recorded in the left-

hand column near the number of each item. You can then take a copy of your test, place in the correct answers in the left margin, and use this, page by page, to facilitate easy scoring of students' answers.

Matching Tests. Matching tests are those in which an item in the first column is to be paired with a word or phrase in the second column. There are many kinds of learnings which involve association of two things. Generally, matching items measure only whether the association has been made and whether the student recognizes it. Ordinarily, matching items do not test the extent to which meaning has been established.

A matching test increases in difficulty for the student as the total number of items to be matched increases and as the number of items to be chosen from in the right column is increased over that in the left. Thus, twenty dates to be matched with twenty names is more difficult than five of each; also, five authors to be matched with ten titles is more difficult than five to be matched with five.

Here are matching items in which you are to match author with title of test:

- | | |
|---|--|
| 1. Mooney, Ross L. | a. California Test of Personality |
| 2. Richardson, Bellows, Henry and Company | b. General Ability Tests |
| 3. Spitzer, H. F., Horn, Ernest, and others | c. Individual Tests of Intelligence |
| 4. Terman, Lewis M., and Merrill, Maude A. | d. Interest Blank for Men |
| 5. Tiegs, Ernest W., and Clark, Willis W. | e. Iowa Every-Pupil Tests of Basic Skills |
| | f. Minnesota Multiphasic Personality Inventory |
| | g. Problems Check List |
| | h. Progressive Achievement Tests |
| | i. Revised Stanford-Binet Scale |
| | j. SRA Clerical Aptitudes Test |

By having to select correct answers from among ten rather than five, most possibility of guessing is avoided; time for answering the five items is increased; and the group of items is somewhat more difficult.

Here are five suggestions related to constructing matching tests. What others do you think are important?

1. Use related materials within groups of items to be matched. For

example, if you wish to test association of synonyms and association of men with events, use two groups of items—the first dealing with synonyms and the second with men and events.

2. Do not provide clues to answers. Note that in the items just presented no test title was used which had the name of the author included; also, each right-hand column phrase was set up with capitals in the same manner so that on that basis you could not differentiate between an actual test title and a fictitious one.

3. Include at least five items for each group to eliminate the possibility of guessing. When only four are used in a group and the student knows two of them, he has a fifty-fifty chance of guessing the other two correctly. Also, he may give the same answer for both unknowns, thus assuring himself that one is correct.

4. Recognize that the number of items per group should be suited to the developmental level of the learners and to the difficulty of the items.

5. Extremely long groups are time consuming and difficult to construct. More important, when many errors are made by the student in long groups, the test has very little diagnostic value.

There are many kinds of objective tests in use other than the four discussed. The multiple-response item requires that the student choose all the items of a group which are correct. Adaptations of the alternate-choice are manifold. A most recent adaptation requires that the students decide whether a statement is always true, usually true, always false, or usually false. This should probably be classified as a multiple-choice item when only one choice is counted correct; frequently, however, two choices are counted correct with one choice given a higher score than the other, and the incorrect choices receiving weighted negative scores. In the true-false test where the student is to change a false item to make it correct, scoring is greatly impeded.

In constructing objective tests for classroom use, it is usually good procedure to include several types of items: completion items for measuring recall and relationships; alternate-choice for facts, attitudes, information, and less penetrating understandings; matching items for associations; and multiple-choice for more penetrating understandings, discrimination, and relationships. Problems in mathematics and science

requiring use of scratch paper may be included in an objective test with one correct answer to be supplied by the student or with the correct answer to be chosen from three or more choices.

One major strength of teacher-made objective tests over standardized tests is that they may be constructed to measure outcomes directly related to class objectives. A major weakness is low reliability. To check reliability of your objective tests do this: First, construct the best test possible and administer it. Second, score first the odd-numbered items and then the even-numbered items. Third, record the score on the odd-numbered items and then on the even-numbered items for each individual. Now, if the two scores for each individual are exactly the same, your test is 100 percent reliable. Suppose it is a 100-item test and many individuals have differences of four or more in scores on the two parts. Your test is not highly reliable. Suppose a student made a score of 38 on the fifty odd-numbered items and a score of 34 on the fifty even-numbered items. The percentage correct for each part test is 76 and 68, respectively. Suppose 70 percent is a passing mark. Which of the two scores should be used to decide whether the student passed? Your marking system should not have finer limits than the reliability limits of your test.⁸

INFORMAL TECHNIQUES OF EVALUATION

Informal methods of evaluation are needed to supplement tests in four major areas: securing important kinds of information not obtainable with paper-and-pencil tests; appraising quality of work performance and conduct; appraising less tangible but important aspects of student growth as in motivation for learning, interests, and attitudes; and setting up methods for student self-appraisal. In previous chapters the observational case study, anecdotal records, sociometric tests, and check lists of emotional and social maturity were discussed. You may want to review these. At this time consider methods for securing information from students, rating scales for measuring less tangible but important outcomes of education, and self-evaluation techniques.

⁸ To compute reliability coefficient, see Quinn McNemar, *Psychological Statistics*, New York, John Wiley & Sons, 1949, pp. 127-134.

SECURING INFORMATION FROM STUDENTS

Questionnaires, diaries, and conferences are frequently used to secure information from students.

The questionnaire may be adapted to securing many kinds of information and may be organized to obtain general or specific responses. First, examine types of questions intended to secure general responses:

1. Do you feel well and physically fit?
2. What do you like most about your home?
3. What are your favorite recreational activities?
4. Which radio programs do you like most?
5. How do you get along with your classmates?
6. Which classes do you enjoy most?
7. What work do you do outside school in your home and outside your home?
8. What are your plans after graduation?
9. For what kinds of work do you think you are best suited?
10. Are you getting from school what you need most?

Each of these questions might be made more specific and incorporate a checking feature. In this case summarizing answers is less difficult, but considerably more time is needed to construct the questionnaire; also, the student's response is guided and not permissive. Thus, the first question: "Do you feel well and physically fit?" could be subdivided to include specifics, only one of which the student is to check:

- a. All of the time; never feel tired or ill.
- b. Most of the time; once or twice per month feel tired.
- c. Several times each month feel tired or unwell.
- d. Feel tired or ill as many days as feel well.
- e. Feel ill or tired most of the time.
- f. Have not felt well for the past months.

The student checks one of the choices but does not give any reasons for his feeling. If the question is designed to get the student's attitude toward his health and possible cause, it is better to use the general question and not include the specific choices to be checked.

Diaries, which broadly interpreted mean records of all kinds kept by the individual, may be used to secure information. The student may keep a record of attendance at movies and his reactions toward them, books or magazines read during a given time, activities completed in a class, actual hours spent daily in study or recreation, and many other kinds of activities.

Interviews may be carried out between the teacher and student to secure information. In an interview, the teacher may get evidence concerning interests, attitudes, or personal problems. The interview may be rigidly organized to get specific information or may be quite permissive. An example of a highly standardized interview is that outlined for administering the Revised Stanford-Binet Scale. A permissive interview is one in which the student comes to talk over a problem with the teacher, and the teacher listens "clinically" to estimate the intensity of the problem and the attitude of the student toward his problem.

Here are some general guides to use of questionnaires, diaries, and interviews in securing information:

1. Devise informal evaluation procedures to secure information related to the objectives of the class or the school.
2. Organize the informal procedures as carefully as written tests.
3. Make sure that students know that your purpose in securing information is to provide a better learning situation for them.
4. Anticipate that students vary widely in degree of frankness of responses even when they know that the purpose is to provide a better learning situation for them.
5. Do not use results obtained from informal procedures for comparative marking or for giving rewards. When this is done, students give answers which they think are wanted.

RATING SCALES

The simplest rating scales indicate two degrees, such as excellent or poor. More discriminating scales use four or more ratings—as many as the rater can reliably differentiate.

Rating scales attempt to arrive at objective estimates of performance. The main factors which determine the objectivity of a scale are the exactness with which the performance being rated is defined and

the discrimination with which the various ratings are made. The reliability of ratings depends upon the competence of the person performing the rating.

Rating scales may be devised for evaluating performance, such as that exhibited in a theme, a news story, a painting, form in typing, playing a musical instrument, delivering a talk, participating in a panel, etc. Rating scales may also be used in evaluating conduct, such as behavior to opposite and own sex, constructive control needed to be employed by the teacher over the individual, constructive control exercised by the student over other class members, and extent to which the student dominates or withdraws. The teacher may rate intensity of interest exhibited or quality of emotional expression. Significantly, the performances and qualities of conduct listed above are important factors in classroom situations, and no paper-and-pencil tests adequately measure any one of them. One cannot make rating scales for all of them; but where improvement in a specific performance, such as oral expression, in development of a social skill, such as adjustment to the opposite sex, or in development of greater interest in learning activities is an objective of instruction, rating scales may prove useful.

A scale follows to show how participation in class might be rated:

1. Participates in all activities.
2. Participates in most activities.
3. Passively carries out most activities.
4. Passively carries out a few activities.
5. Actively resists participating in a few activities.
6. Actively resists participating in most activities.

This scale might be used by both the teacher and the student; and, in conference, the student and the teacher would try to agree on the particular rating. Further, before putting the scale into operation, it would be prudent to ask the students to help construct it so that they understand the ratings and are motivated to cooperate in the rating. These general guides may be useful in constructing rating scales:

1. Select qualities and performances for rating in relation to objectives. Generally, it is unwise to attempt to rate students on a quality or performance which you do not attempt to develop in the class.

2. Use rating scales for important objectives which cannot be appraised by other means. It is better to rate performance related to one or two objectives and do it well than to organize many scales which involve snap judgments.

3. Carefully describe each rating in terms of your ability to discriminate performance and behavior related to it. It is better to use only three ratings on a given performance on which you can discriminate than to use many in which you have difficulty in deciding the rating.

4. Compare your ratings of an individual's performance with the ratings of another teacher who understands the scale and performs the rating at the same time.

5. Make your scales understandable to students so that they aspire to achieve higher performance and so that they may rate themselves or one another.

In conclusion, informal evaluation techniques are an important part of total evaluation because the information secured is frequently as important as that obtained in tests. As yet we have not devised written tests which adequately measure quality and values, motivation, or attitudes. Further, written tests do not secure information concerning many aspects of the individual's unique developmental pattern—information which is necessary for effective instruction of the individual because he is unique. Evaluation, including a return to the more informal methods of appraisal, has received much attention in recent years because of a changing philosophy of secondary education. We want to make secondary school valuable for all youth; therefore, we organize and use evaluation techniques by which school is made most valuable to each individual.

INTERPRETING TEST DATA

Teachers frequently want to summarize scores on teacher-made tests through use of statistical procedures. In order to do so, one needs to be able to compute range, median score, mean score, percentile, and standard deviation. Significance of difference in mean scores between two groups may be ascertained through computing standard error and critical ratio. Data secured by administering the same teacher-made, objective test of 125 multiple-choice items to two eleventh-grade classes in United States history follow. Procedures for making statistical analy-

ses are sketched. You may compute each of the measurements listed to check accuracy of computation.

| Class A | | Class B | |
|-------------------|-----------|---------|-----------|
| Score | Frequency | Score | Frequency |
| 116 | 1 | 114 | 1 |
| 111 | 1 | 105 | 1 |
| 110 | 1 | 104 | 1 |
| 103 | 2 | 99 | 1 |
| 98 | 1 | 97 | 2 |
| 94 | 2 | 94 | 1 |
| 93 | 1 | 93 | 1 |
| 91 | 1 | 88 | 1 |
| 89 | 1 | 87 | 1 |
| 88 | 1 | 86 | 1 |
| 87 | 1 | 85 | 1 |
| 83 | 3 | 83 | 1 |
| 82 | 1 | 80 | 2 |
| 81 | 1 | 79 | 2 |
| 79 | 1 | 78 | 1 |
| 77 | 1 | 77 | 1 |
| 69 | 1 | 76 | 3 |
| 68 | 1 | 75 | 2 |
| 65 | 2 | 74 | 1 |
| 63 | 1 | 73 | 1 |
| 58 | 1 | 68 | 1 |
| 55 | 1 | 67 | 1 |
| | | 64 | 2 |
| Total in class | <u>27</u> | | <u>30</u> |
| Median score | 83.0 | | 79.5 |
| Mean score | 84.74 | | 83.10 |
| Diff. of means | +1.64 | | |
| Standard dev. | 16.06 | | 12.35 |
| σ of mean | 3.09 | | 2.25 |
| σ of diff. | | | 3.82 |
| Critical ratio | | | 0.43 |

1. *Range* is the distance between highest and lowest score. In Class A the range is 61; in Class B, 50.

2. When one converts raw scores on standardized tests into *percentiles* based on norms, it is interesting to compare the percentile scores of students on the standardized test with the percentiles based on the scores made in the class. In computing percentiles for small groups, it is usually sufficient to arrange them in units of ten: the tenth percentile, twentieth percentile, etc. Sometimes these are called deciles. Percentiles and deciles are computed in the same manner. The tenth percentile is defined as the point below which 10 percent of the cases fall; the twentieth percentile is the point below which 20 percent of the cases fall. In Class B, the tenth percentile is 67, the twentieth percentile is 74, and the ninetieth percentile is 99.

3. The *median score* is that point at which half the class is above and the other half is below. If the number is odd, the median score is that made by the midmost individual. It lies midway between the two middle individuals if the number is even.

4. The *mean score* is obtained by adding all scores and dividing by their number. The formula for computing mean score is

$$M = \frac{\Sigma X}{N}$$

where M is mean score, ΣX is sum of all scores, and N is number. The mean score is the average score made by all individuals.

5. The formula for computing *standard deviation* is

$$\sigma = \sqrt{\frac{\Sigma X^2}{N}}$$

where σ is standard deviation and ΣX^2 is sum of the differences of each score squared from the mean score. Standard deviation tells how variable a group is from the mean or average score. Class A, you note, is more variable than Class B, with standard deviations of 16.06 and 12.35, respectively.

6. The formula for computing *standard error of the mean* is

$$\sigma_M = \frac{\sigma}{\sqrt{N}}$$

where σ_M is standard error of the mean, and σ is standard deviation. For Class A, the standard error of the mean is

$$\frac{16.06}{\sqrt{27}}$$

or 3.09. We need to know the standard error of the mean score to determine the magnitude of error of the mean score.

7. The formula for *standard error of the difference of means* is

$$\sigma_{DM} = \sqrt{\sigma_{M1}^2 + \sigma_{M2}^2}$$

where σ_{DM} is standard error of the difference of means, σ_{M1}^2 is the standard error of the first mean squared, and σ_{M2}^2 is standard error of the second mean squared. We need to compute standard error of difference of mean scores to determine magnitude of sampling and chance errors of the two mean scores.

8. *Critical ratio* is computed thus

$$CR = \frac{D_M}{\sigma_{DM}}$$

where D_M is difference in mean scores, and σ_{DM} is standard error of the difference of the means. To interpret the critical ratio one needs tables or further computation to be exact. For comparing most sets of scores for classes of twenty-five to thirty-five, these critical ratios and their meanings are probably sufficient: *CR* of 2.04 means that there are nineteen out of twenty chances that the difference obtained is a true difference. *CR* of 2.75 means that there are ninety-nine out of a hundred chances that the difference obtained is a true difference.

The longest computation is that for standard deviation. Once mean score and standard deviation have been computed, other procedures require little time. There are shorter methods for computing mean score and standard deviation than those described. You may want to examine a statistics text to learn how to make these computations.⁹

SUMMARY

Evaluation is the continuous process of securing and interpreting data to ascertain quality and extent of student growth toward objectives. Gathering and interpreting data help to appraise the validity of objectives, the extent to which objectives are being achieved, and the value of class activities in achieving the objectives. Data interpreted to and by students help them to measure progress, appraise strengths and weaknesses, and plan more intelligently. A comprehensive evaluation program provides the necessary information for improving classes,

⁹ *Ibid.*, pp. 16, 22.

for improving the curriculum, and for reporting to parents. Evaluation is necessary for the teacher to appraise progress in teaching and for the student to appraise progress in learning. A comprehensive evaluation program includes use of measuring instruments such as standardized and teacher-made tests and informal procedures such as record keeping by students.

Standardized tests have four distinctive characteristics: (1) Validity and reliability have been established and are usually high; (2) the method of administration is standardized; (3) the scoring is standardized; and (4) interpretation of scores made by students is standardized in that norms have been established for the test whereby raw scores may be converted into derived scores. Standardized tests may be grouped in these categories: achievement, intelligence, personality, aptitude, and interest. Standardized tests provide useful evaluative evidence. Frequently standardized achievement tests do not measure outcomes directly related to objectives of a class. Teacher-made tests may accomplish this purpose more directly.

Teacher-made tests commonly used are essay and objective. Essay tests are useful in appraising clarity of written expression, ability to organize large bodies of factual information into meaningful patterns, and ability to evaluate critically. Chief weaknesses of essay tests are difficulty of reliable scoring and length of time for administration and scoring. Objective tests are more accurately and easily scored but are not well adapted to measuring the first two abilities noted for essay tests. Four types of objective test items widely used are completion, alternate-choice in various forms, multiple-choice, and matching. Each of these has strengths and weaknesses and should be used to achieve specific evaluation purposes. Generally, multiple-choice items are superior to others in appraising understandings, relationships, discrimination, and judgment.

Informal methods of evaluation are needed to supplement tests in five major areas: securing important kinds of information not obtainable with written tests, such as the student's plans for the future; appraising quality of performance, as in art or swimming; appraising quality of conduct; appraising less tangible but important areas of growth—motivation for learning, interest in school, and attitudes to-

ward classmates and teacher; and student evaluation of own performance and conduct. Questionnaires, check lists, diaries, records, rating scales, sociometric tests, and conferences are frequently used to secure data related to these areas.

To summarize and interpret scores and ratings, elementary statistical procedures are helpful. Being able to compute range, percentile, median, mean, standard deviation, and standard error is useful in summarizing and interpreting teacher-made test scores. Since standardized tests makers frequently assume teacher understanding of mean, median, percentile, and deviation, operational familiarity with these terms facilitates interpretation of standardized scores and comparison of a classroom group with the standardization group.

QUESTIONS AND ACTIVITIES

1. Describe the essential features of an evaluation program.
2. List the values which accrue to (a) students, (b) the teacher, and (c) parents through a sound program of evaluation carried out in each classroom.
3. Describe the characteristics of a standardized test. Examine several standardized tests in a given area of achievement such as reading and accompanying manuals to make sure that you understand strengths and weaknesses of standardized tests.
4. What major purposes may be achieved through use of standardized tests in the classroom? In a whole school?
5. Discuss the quality of items used in standardized tests.
6. What are the principal types of teacher-made tests? Describe instances in which teacher-made tests may be used to better advantage than standardized tests.
7. Explain how teacher-made tests may be used most advantageously. Describe procedures which the teacher may use to help students measure their own progress.
8. Write a test related to materials presented in this chapter. Include the following types of items: (a) completion, (b) alternate-choice, (c) multiple-choice, (d) matching, and (e) essay. Administer the test to discover strengths and weaknesses of the test.

9. Construct a questionnaire and a rating scale, each to be administered to high school students during the first week of school in a class you teach. After constructing them, have classmates, teachers, or high school students appraise the items for strengths and weaknesses.
10. Define the statistical terms and procedures which each teacher needs to know in order to interpret standardized scores and to understand scores made by students on teacher-made tests.
11. Drawing from your experiences in a high school or college class, describe the best and the poorest system of evaluation you have known. What were the major factors which led to the superiority of one and the inferiority of the other?
12. Organize a plan for reporting to parents which overcomes most of the objections to a report card system which lists only subjects taken and single marks in each subject.

REFERENCES

- Buros, Oscar K. (ed.), *The Third Mental Measurements Yearbook*, New Brunswick, Rutgers University Press, 1949.
- Chamberlin, Dean, et al., *Did They Succeed in College?* New York, Harper & Brothers, 1942.
- Hawkes, Herbert E., et al., *The Construction and Use of Achievement Examinations*, Boston, Houghton Mifflin Company, 1936.
- Leonard, J. Paul, and Eurich, Alvin, *An Evaluation of Modern Education*, New York, Appleton-Century-Crofts, Inc., 1942.
- National Society for the Study of Education, *The Measurement of Understanding, Forty-Fifth Yearbook*, Chicago, University of Chicago Press, 1946, Part I.
- Remmers, H. H., and Gage, N. L., *Educational Measurement and Evaluation*, New York, Harper & Brothers, 1943.
- Rivlin, Harry N., *Teaching Adolescents in Secondary Schools*, New York, Appleton-Century-Crofts, Inc., 1948, chap. 14.
- Ross, C. C., *Measurement in Today's Schools*, New York, Prentice-Hall, Inc., 2nd ed., 1947.
- Schorling, Raleigh, *Student Teaching*, New York, McGraw-Hill Book Company, rev. ed., 1949, chap. 13.
- Smith, Eugene, and Tyler, Ralph, *Appraising and Recording Student Progress*, New York, Harper & Brothers, 1942.

Recurrent Problems of Teaching

Throughout this book, teaching has been described as a process of organizing and guiding the learning activities of youth for the purpose of bringing about desirable modifications in their total behavioral patterns. As teachers help adolescents build understandings, skills, and attitudes through engaging in meaningful learning activities in the regular classroom program of instruction, in the cocurricular program, in school-community projects, and in counseling interviews, the behavioral patterns of youth change gradually and continuously. The goal of secondary teaching is to guide this change so that each maturing youth becomes a well-adjusted individual producer and a socially conscious, coöperating member of the groups to which he belongs.

The teacher needs many understandings, skills, and attitudes in order to become proficient in organizing and guiding learning activities. In the discussion of these in previous chapters, information was presented to help you formulate your own understandings, skills, and attitudes to guide action in teaching particular groups of adolescents in particular schools. Certain problems occurred repeatedly in these discussions—problems which require the teacher to study intensively, work co-operatively with others interested in the same problems, and experiment to find solutions. The more important of these recurrent problems which cut across chapter and section organization in this book and which have become more crucial with the changing functions of secondary education in modern life are:

1. Implementing a developmental sequence of learning in teaching practice.

2. Relating school learning to out-of-school life of youth.
3. Providing for differences in kinds of abilities and rates of learning.
4. Conducting person-to-person relations in a democratic manner.
5. Providing counseling when students need it.
6. Evaluating outcomes of instruction on the basis of student progress in many areas of growth.
7. Upgrading the profession.
8. Building an adequate system of values related to secondary education.

Each of these is discussed briefly.

IMPLEMENTING A DEVELOPMENTAL SEQUENCE OF LEARNING IN TEACHING PRACTICE

The chief task adolescents face in the years from twelve to eighteen is growing from immaturity to maturity or from dependence to independence. The chief purpose of secondary education is to assist the adolescent in this process. The whole program of secondary education is designed to help youth mature physically, mentally, socially, and emotionally. Through engaging in learning activities in a number of different classes over a period of years, the student develops into a more self-sufficient and self-directive individual as he organizes and reorganizes his learning experiences into more meaningful patterns of understanding and action.

In classes and cocurricular activities, how can we organize learning activities which are in harmony with the developmental patterns of maturing adolescents and with the continuous, developmental nature of learning? These questions need to be answered: (1) What is the sequence of activities which most learners go through in developing important understandings, skills, and attitudes? (2) What subject matter is of most worth in these activities? (3) What materials are needed to make the learning activities most meaningful? (4) How may length of instructional periods in which to carry out the learning activities be organized most efficiently? (5) What is the best type of guidance the teacher can give to the learners? A great deal of experimentation in actual classroom situations throughout the United States is needed to find answers to these questions as they bear on outcomes usually

sought in our secondary schools. Note a few changes which have occurred during the past fifty years.

A superior method of teaching spelling was found in the later 1800's whereby time spent in teaching spelling could be reduced by over 50 percent and yet students learned to spell more efficiently. In shorthand and typing, method which started with teaching the alphabet has gradually given way to teaching syllables and phrases. Underwater swimming and surface floating have little by little replaced arm, leg, and breathing exercises as initial practice in swimming. Formal calisthenics as physical activity has been eliminated almost completely. Every report which your author has found shows that high school students learn more historical facts when the learning begins with finding a solution to a more immediate problem and its historical significance than when history is studied in a chronological pattern without problem solving. Apparently, aesthetic appreciations related to art and music are built more efficiently through exploring aspects of beauty in the immediate environment and through widespread use of art and music in many classroom situations than through teaching the history of art or music, the life of the artists, or great masterpieces. Emotional and social controls are learned more efficiently through learning activities involving actual interaction with others than through reading and listening.

The above examples indicate that we are gaining better understanding of the developmental sequence of learning and how to implement it in teaching practice. We have come to agree more generally that (1) meaningful learning occurs only as the learner has purpose for it, (2) the learner must perceive the major features of the desired outcome early in the teaching-learning situation, (3) learning is an active process requiring attention and use of intelligence, (4) learning is characterized by continuity, and (5) learning moves from familiar to new, from simple to complex, and from concrete to abstract. For every kind of learning outcome which may be an important instructional objective in any class or in any series of classes, there is undoubtedly a sequence of activities, arrangement of time, selection of subject matter, and use of materials which will help the particular learners achieve the outcome most efficiently in the particular teaching-learning situation.

RELATING SCHOOL LEARNING TO OUT-OF-SCHOOL LIFE OF YOUTH

What are the problems common to youth of secondary school age? According to the Ten Imperative Educational Needs they are (1) developing salable skills, (2) maintaining good health and physical fitness, (3) carrying out rights and duties of citizens, (4) understanding the significance of family life, (5) purchasing and using goods wisely, (6) understanding and using the methods and facts of science, (7) appreciating beauty in literature, art, music, and nature, (8) using leisure time productively, (9) respecting other persons and living coöperatively with others, and (10) communicating effectively and intelligently. The developmental tasks of youth outline the same general learning problems with more emphasis on developing social and emotional controls in order to be well-adjusted individuals and to get along well with others. You note that each of these problems is met by the adolescent in his home and neighborhood as well as in the school. Learning activities in the school should be related to life of the student in the home and the community.

If we accept these as valid statements of learning problems which most youth face in their growth from dependence to independence, then we organize learning activities which help youth meet these problems. In all classes we try to help boys and girls perceive the relationship between the class work and achieving success in meeting one or more of the problems. Adjustment problems which youth meet in the home, the neighborhood, or the school are given attention in the class. Field trips, community surveys, and school-community projects are undertaken. In brief, each teacher makes learning activities more meaningful for students through helping them perceive the relationship between their school activities and solution of important life tasks such as selecting a vocation, being successful and happy in work, enjoying leisure time, getting along better with others, finding beauty in the immediate environment, or gaining mastery over some aspect of the environment. Wherever practicable, teachers utilize community resources in order to help youth build the understandings, skills, and attitudes which are necessary for effective democratic life in the community.

Regular classroom instruction should be an integrative force in help-

ing students meet life problems which arise because they are maturing into adult citizenship status. It is entirely possible that in some schools the part of the high school program required of all students should be organized into fewer instructional periods per day with greater integration of subject fields in order that the school life and community life of youth may be brought into closer harmony.

PROVIDING FOR DIFFERENCES IN KINDS OF ABILITIES AND RATES OF LEARNING

Individuals vary in abilities—manual, verbal, social, and artistic. A range from fourth- to tenth-grade achievement in reading, arithmetic, spelling, and English usage is commonly found in seventh-grade classes. With excellent teaching, differences are likely to increase rather than decrease because some students are ahead of others at the beginning and they continue to learn more rapidly. We expect high school seniors to vary more widely on any achievement test than do seventh-grade students. Some graduating seniors' scores in science or social studies achievement are equal to those of the average seventh-grade student; others are equal to those of college seniors.

How can we provide for such differences? In many classrooms these procedures are appropriate: (1) discovering where students are at the beginning and trying to start learning activities where the students are; (2) where reading constitutes an important means of learning, providing reading materials which are understood by students with different levels of reading comprehension; (3) using instructional materials such as sound films, slides, and recordings which are quite readily understood by all and are yet interesting to all; (4) allowing for an appropriate degree of student participation in planning and executing work activities so that students help in deciding what they can do in relation to their abilities; (5) setting aside part of the class period for individualized study so that individuals may proceed at rates best suited to them; (6) using varied types of activities such as group discussions, sociodrama, individual and group reports, and committee work for solving problems or completing projects to allow for expression of different kinds of abilities; and (7) making flexible assignments which anticipate that students will progress at unequal rates. We recognize

that the teacher with five or six classes of twenty-five or more students per class cannot provide adequately for differences which are usually found in most classroom groups; but the above procedures are more effective than using a single textbook, making common assignments, setting common requirements, or using only one or two instructional methods.

Grouping students in sections according to IQ score, achievement test score in a subject, or previous teacher marks has been tried as a method for getting students more or less alike in the same sections. In some subjects, like arithmetic and English, grouping according to achievement test score helps to produce homogeneity and results in somewhat higher achievement in all sections; but problems related to social interaction and democratic values arise which may more than offset any gains in achievement.

Probably, provision for individual differences will not be made adequately until teachers have fewer classes and fewer students in each class so that they have time to learn the characteristics of each student, to secure needed instructional materials, and to plan for instruction. To secure this condition, it may be necessary to increase the length of instructional periods, to combine single-subject and broad-fields courses still further, to have a teacher follow the same group or groups of students through several years, and to experiment further in deciding what should constitute the major learnings required of all students and how these may be organized most efficiently. To achieve progress and make changes like these in an orderly way, all persons interested in education must work together in a democratic manner.

CONDUCTING PERSON-TO-PERSON RELATIONS IN A DEMOCRATIC MANNER

Five major ideals underlying democratic living are (1) respect for the individuality of other persons, (2) use of intelligence rather than force in solution of problems, (3) coöperation for the welfare of the group, (4) acceptance of responsibility for one's own actions in terms of effect on self and others, and (5) belief that progress will be made. If boys and girls are to learn these ideals as guides to daily conduct, they must understand how they apply in specific situations and must

be given opportunity to practice such conduct in the classroom. Generally, rules for conduct in class should evolve from teacher-led discussion. Rules for conduct in cocurricular activities and school-community projects should evolve from teacher- or administrator-led discussion. In all aspects of school life, students should share in deciding what to do and why, when, and how to do it as soon as they are ready to formulate plans, to evaluate the effects of their actions, and to assume responsibility for their actions. If they never learn to do these things in school with help and supervision from teachers, it is unrealistic to expect them to do so upon graduation or when quitting school prior to graduation.

Besides learning democratic methods of association through guided practice in the classroom, students need teachers, administrators, and parents to serve as models. When the teacher exercises democratic leadership with students, they tend to follow it in their leadership roles. When teachers and administrators follow democratic practices in meeting problems connected with the school, the whole school program operates more smoothly and this results in higher morale among the staff and students. When parents, students, teachers, and perhaps other school officials sit together in case conferences to help individual students meet problems of planning for a career, securing employment, or making a difficult adjustment, this method becomes accepted by students as the best means for solving their problems. When the same persons find solution to improving services in the school or community for youth, students learn this as the democratic way for building a better community.

PROVIDING COUNSELING WHEN STUDENTS NEED IT

Generally, because differences among students in abilities, in home and community backgrounds, in interests, and in plans for the future are not taken into account properly in connection with regular class work, many students are frustrated and become behavioral problems, quit school, or become maladjusted.

With what kinds of problems do students need help? The major problems are: (1) becoming acquainted with school policies, learning facilities and services of the school, and making friends when en-

tering school; (2) deciding which classes to take and how to be successful in them; (3) deciding cocurricular activities in which to engage; (4) learning how to study and use time efficiently; (5) learning to understand and accept their own physique; (6) learning how to make satisfactory adjustments to the opposite sex; (7) learning how to get along with parents and other adults; (8) learning social and emotional controls; (9) meeting financial problems; (10) overcoming weaknesses and capitalizing upon strengths; (11) making decisions and plans concerning how to use leisure time wisely now and in the future; and (12) making plans and decisions concerning immediate work experience and a life career.

In Chapter 5 one type of school organization designed to supply needed counseling was outlined. In this program all students in each grade were in a social studies class throughout each year of the senior high school. The social studies teacher carried out group guidance activities which helped students with many of their problems; a thirty-minute period prior to the social studies class period was available for the teachers to help individuals or groups; and regular counselors were available to help individuals with more severe problems. In this program teachers assumed most responsibility for the guidance services. In Chapter 14 another procedure was outlined wherein counselors with no teaching duties used all their time for individual counseling—one counselor for about three hundred students. Where this practice is followed, teachers assume less responsibility for helping students with personal adjustment problems and with making educational and vocational plans.

Most teachers should give more consideration to helping students with adjustment and planning problems. The maladjusted student does not learn efficiently, or what he learns is not used constructively. The student whose plans are very vague cannot find purpose in his school work. To make guidance in the classroom work well, teachers must want to help students and must have needed understandings and skills in counseling. Further, time must be available for teachers to learn to know students as individuals and to conduct counseling interviews with students assigned to them. When we can get the whole school program of classes and activities so organized that teachers help students meet

their current adjustment problems satisfactorily and make plans for the future intelligently, the need for counseling by specialists who do not teach will be decreased. Guidance specialists will still be needed, but their main jobs will be to help those students who have exceptionally difficult problems and to coördinate the whole program of guidance services.

EVALUATING OUTCOMES OF INSTRUCTION ON THE BASIS OF STUDENT PROGRESS IN MANY AREAS OF GROWTH

Evaluation is a continuous process to ascertain amount of growth toward objectives and to discover values derived by students from engaging in learning activities. Evaluation begins when the teacher in planning tries to identify valid objectives—objectives which, if students grow toward them, will assist them in becoming more effective individuals and better citizens. In the teaching-learning situation, evaluation commences in the attempt to discover where students are, with reference to the objectives, and what the characteristics of each individual are. Standardized tests, teacher-made tests, informal evaluation methods, and techniques designed to help students measure their own progress are the principal evaluative techniques and tools. They should be used primarily to facilitate student learning, to help students appraise their strengths and weaknesses, and to help the teacher organize more effective learning situations. Students should participate in some phases of evaluation because they need help in measuring progress and in judging their own performance and conduct.

Each teacher, with some participation by students as they are ready for it, should decide the major subject understandings and related skills, work and study methods, social and emotional controls, and aesthetic appreciations toward which instruction in a class contributes. Evaluation in the class should be directed toward all of these. The school should then, through democratic group discussion involving administrator, teachers, parents, and students, decide the means for reporting progress to parents and keeping permanent records. One major weakness in many secondary schools is the practice of evaluating students in subject understandings and skills only and reporting to parents by way of single marks based on how one student achieves in relation to

other members of the class or school. Also, in most schools, considerably more emphasis ought to be placed on a thorough evaluation program which helps to discover needs of students in the community, most worth-while subject matter, and organization of classes and activities to make the school of more value to more students living in the community.

UPGRADING THE PROFESSION

The most important contribution a teacher makes to upgrading the profession is being effective in organizing and guiding learning activities of youth in the classroom and in cocurricular activities. This is the teacher's foremost responsibility as a professional person. As suggested in the previous discussion, many problems in improving classroom instruction can be solved only through coöperative effort. Therefore, the teacher needs to contribute time and energy to working with others. Four areas in which to work are now sketched.

First, more teachers, principals, and counselors should give of their time to help student teachers and beginning teachers get off to an excellent start. The goal to work toward here is a program of internship in which the student with the baccalaureate degree spends half or all of his fifth year with an experienced teacher in learning how to teach in the classroom, to counsel students, to conduct cocurricular activities, to engage in some aspect of the whole school program such as curriculum improvement, and to participate in a school-community activity like PTA or a youth recreation center. The widely practiced system in student teaching of one or two hours per day for a semester or even a year has proved and is still proving to be one of the major inadequacies in the preparation of teachers. It will not be improved until more college people, school administrators, and classroom teachers work out an adequate solution.

A second area in which teachers and administrators need to work together is in local, state, and national education associations. Problems of financing education, securing reasonable teaching loads and working conditions, deciding areas for teacher preparation and certification as a means of controlling membership in the profession, and creating a unified profession are solved by individuals and groups work-

ing together at the local, state, and national levels. The various state education associations and the National Education Association have become strong and are recognized as the groups which do most to improve the quality of education for youth in the school and community and to improve working conditions, pay, etc., for teachers. The publications of these associations help teachers keep up with the profession and find areas in which to make contributions. Each college student preparing to teach can profit from membership in Future Teachers of America, and every teacher should belong to his state education association and to the National Education Association. We cannot make rapid progress as a profession unless we are a unified group working together toward the common goal of making education more worth while for children and youth in the school and in the community.

A third area in which teachers need to work together is in defining and living up to a code of professional ethics. A Professional Ethics Committee of the National Education Association, in coöperation with other committees working at state and local levels, has formulated a statement of ethics. As you read the statement, decide what kind of action is necessary at the local level to make sure that every person engaged in education knows what it means and how an organization might be developed to carry out the code:

The teacher should be courteous, just, and professional in all relationships.

Desirable ethical standards require cordial relations between teacher and pupil, home and school.

The conduct of the teacher should conform to the accepted patterns of behavior of the most wholesome members of the community.

The teacher should strive to improve educational practice through study, travel, and experimentation.

Unfavorable criticism of associates should be avoided except when made to proper officials.

Testimonials regarding the teacher should be truthful and confidential.

Membership and active participation in local, state, and national professional associations are expected.

The teacher should avoid indorsement of all educational materials for personal gain.

Great care should be taken by the teacher to avoid interference between other teachers and pupils.

Fair salary schedules should be sought and when established carefully upheld by professionals.

No teacher should knowingly underbid a rival for a position.

No teacher should accept compensation for helping another teacher to get a position or a promotion.

Honorable contracts when signed should be respected by both parties and dissolved only by mutual consent.

Official business should be transacted only through properly designated officials.

The responsibility for reporting all matters harmful to the welfare of the schools rests upon each teacher.

Professional growth should be stimulated through suitable recognition and promotion within the ranks.

Unethical practices should be reported to local, state, or national commissions on ethics.

The term "teacher" as used here includes all persons directly engaged in educational work.¹

Each year the committee prints a report. The 1948 and 1949 reports give illuminating accounts of problems encountered and of progress being made.

A fourth area for improving the profession is through teachers' accepting their responsibilities and duties as citizens—political, social, and economic. Besides maintaining good relations with parents and others interested in the school, teachers should vote in elections and follow accepted professional standards of conduct during political campaigns. At no time should one in the capacity of a teacher or during school hours attempt to get votes or funds for a particular candidate or candidates. Teachers probably should follow political practices similar to those outlined for federal civil service workers in the Hatch Act.

Teachers working together in the locality should decide the area in which they may participate in social affairs and how to conduct themselves. Problems related to dancing, smoking, dating, joining clubs, or participating in religious activities should be given careful attention.

¹ National Education Association, *Report of the Professional Ethics Commission*, Washington, National Education Association, 1949, p. 24.

Conduct in the presence of youth should be exemplary. Parents and school officials should not be offended by actions teachers follow in conduct of personal affairs, and teachers should not have their rights as citizens curbed unduly or unfairly. In every locality, administration, teachers, and parents should work together to decide what is worthy conduct for school people and parents.

Though salaries are often low in a given school system, the community anticipates that the teacher will pay his bills promptly, be honest in all economic transactions, and provide for retirement. Increasingly, localities and states are making more satisfactory provisions for tenure in position, adequate salary schedules, group medical and hospital care, and security upon retirement. Each teacher should know the salient features of these programs because they are intimately connected with economic life in the community. Teachers need to take unified action to secure and protect economic security.

BUILDING AN ADEQUATE SYSTEM OF VALUES RELATED TO SECONDARY EDUCATION

The teacher is more efficient in performing his roles and as an organizer of learning activities, as a counselor and guide of maturing adolescents, as a professional person, and as a productive citizen of the community when many attitudes pertaining to the role of secondary education in modern life have been integrated into a unified value system. The more important of these are summarized: (1) Parents want their children to learn subject understandings and skills as usually organized in broad fields—English, social studies, science, etc. Increasingly parents also want the school to help children learn to care for their bodies and health, learn a salable skill, develop a special skill as in art or music, manage a home, manage finances, live coöperatively with others, and avoid personal maladjustment and delinquency. (2) All adolescents of school age, except those seriously handicapped mentally, physically, or emotionally, should be in school and build learnings such as those just enumerated. (3) Adolescents, except for a small minority who are handicapped, have sufficient learning abilities to profit from excellent instruction. (4) Adolescents, with few exceptions, are worthy individuals and should be treated with re-

spect, considerateness, and courtesy. (5) Adolescents want to learn how to improve the quality of human associations in the school and the community. (6) Intelligent solutions can be found to problems arising in teacher-student relations, teacher-teacher relations, and teacher-community relations without frequent recourse to force. (7) Youth should develop increasing faith in the future through meeting their learning problems successfully in school with a minimum of frustration and failure. (8) Teaching subject understandings and skills and helping youth meet adjustment and planning problems go hand in hand; both are important and inseparably connected in any good teaching-learning situation. (9) Teaching is the most effective means whereby I (the person who teaches) may achieve happiness and self-realization of life goals. (10) Teachers as an organized professional group can find solutions to their problems through employing democratic methods of association and the scientific method of problem solving.

These attitudes are perhaps as important as understandings and skills in professional teaching; to some extent they determine how one gets along in his relations with students in the classroom, with other professional people in the school community, and with persons in the local, state, and national community.

To help each youth build understandings, skills, and attitudes to become a well-adjusted individual, an efficient producer of the good things of life, and a socially conscious and coöperating member of the groups to which he belongs is the major goal of the teaching profession. No other professional group in America has more worth-while goals, nor do individual members of other professions contribute more of their time and energy to helping youth with their pressing developmental problems. As a professional group, we must improve ourselves, the profession, and the quality of educational services rendered to youth because the American way of life as we have come to know and cherish it depends in large measure upon the extent to which we are effective in our classrooms, in the whole school program, and in our relations with youth and adults in the community.

Appendix A: Instructional Films

With few exceptions, the films listed have been used by the author in his college classes. No attempt has been made to include all films which might serve to make the chapter discussions more concrete; rather, those films which proved to challenge the resourcefulness of upper division and graduate students, many with teaching experience, were selected. Dr. Herbert Jensen, Director of the Instructional Materials Center, Colorado State College of Education, assisted in preparing the list.

Guides to efficient use of films are outlined in Chapter 10. You may find it helpful to refer to the guides before selecting and using any of the films which follow. Generally, each film listed is useful in arousing interest in specific problems or in helping to develop concepts and skills related to a discussion.

Each film is listed once and in an order which follows chapter discussions. In each case the producer of the film is indicated. You may refer to the *Educational Film Catalog*, New York, H. W. Wilson Company, for locating distributors. All films are 16 mm.

INTRODUCTION

Assignment Tomorrow. 26 minutes, sound, black and white (National Education Association).

Outlines the role of the modern teacher in contributing to the life of the community, state, nation, and world.

Who Will Teach Your Child? 23 minutes, sound, black and white (McGraw-Hill Book Company).

Illustrates how methods of instruction must be changed to meet the characteristics of a changing society; also dramatizes the need for more and better prepared teachers.

CHAPTER 1

The Drop Out. 20 minutes, sound, black and white (McGraw-Hill Book Company).

Begins by showing a young man looking for a job. He quit school in the first high-school grade. He is representative of that half of youth who do not finish high school. The effects of quitting school are portrayed as is the apparent unconcern of some teachers and administrators about youth who quit school.

The Stay In. 19 minutes, sound, black and white (McGraw-Hill Book Company).

This follows *The Drop Out* and shows how curricula and instructional methods may be organized to hold youth in school through providing opportunities for educational activities which are important, through an adequate program of teacher attention to individual differences, and through a program of guidance.

CHAPTER 2

Individual Differences. 23 minutes, sound, black and white (McGraw-Hill Book Company).

Shows a sixth-grade boy who is different from his brother in verbal, social, and music aptitudes. The first part of the film shows that his differences from his brother were not discovered. This led to maladjustment and no purposeful learning. The second part of the film shows how the teacher recognized the characteristics which made the boy unique and capitalized upon them.

Learning to Understand Children: Part I—A Diagnostic Approach. 20 minutes, sound, black and white (McGraw-Hill Book Company).

Dramatizes the story of an adolescent girl who fails to adjust to the school situation. The teacher's role in discovering the cause of the maladjustment is identified.

Learning to Understand Children: Part II—A Remedial Program. 22 minutes, sound, black and white (McGraw-Hill Book Company).

Continues the story of the adolescent girl and shows how the teacher helped her make a better adjustment in meeting the "developmental tasks" which were intensified because of the home situation. Coöperative effort involving all the teachers who had her in class facilitated the readjustment process.

CHAPTER 3

Importance of Goals. 19 minutes, sound, black and white (McGraw-Hill Book Company).

A junior-high-school adolescent, Tommy, finds nothing in school which

challenges his interests because the learning situation is poorly organized. The teacher learns of Tommy's interest in becoming a school traffic director. Other information is presented which shows Tommy to be a normal healthy boy with many and varied interests. The teacher keeps Tommy after class and tells him that he has recommended him to the principal for becoming a traffic director. This apparently challenges Tommy sufficiently to "work to make the grades necessary to qualify." The film stresses the need for the school situation to capitalize on the interests and needs of adolescents.

Motivating the Class. 19 minutes, sound, black and white (McGraw-Hill Book Company).

A student teacher "loses" his class in mathematics because he does not know how to capture the interest of the students. His high interest in the subject so completely overshadows his understanding of the learners that no purposeful learning results. His supervising teacher helps him analyze the situation and utilize student interest to improve the learning situation.

CHAPTER 4

Experimental Studies in Social Climates of Groups. 31 minutes, sound, black and white (University of Iowa).

This is the University of Iowa experiment depicting the outcomes of democratic, laissez-faire, and autocratic leadership. The situations dramatized are excellent but the photography and sound are quite poor.

Of Human Rights. 20 minutes, sound, black and white (United Nations Film Division).

An incident which arises from economic and racial prejudice among children is used to dramatize the importance of bringing to the attention of the peoples of the world their rights as human beings as set forth in the Universal Declaration of Human Rights proclaimed by the United Nations General Assembly in December, 1948.

CHAPTER 5

Learning Democracy Through School-Community Projects. 22 minutes, sound, color (University of Michigan).

Dramatizes how some of the public schools in Michigan organized projects involving the school and community which led to better relations between school and community and which helped students assume a higher degree of initiative and responsibility, under teacher direction, for con-

tributing to the life of the community. Shows that the once regarded "frills of education" and "extra-curricular" program are now an integral part of the instructional program.

CHAPTER 6

Broader Concept of Method: Part I—Developing Pupil Interest. 15 minutes, sound, black and white (McGraw-Hill Book Company).

In the first part of the film, a traditional textbook-class-recitation method of instruction is dramatized. The study of civics is a study of what the textbook contains. After this ineffective situation, various kinds of activities involving individual and group work are shown. Finally, the whole class becomes involved in the study of how to improve the school's cafeteria. Their activities are shown in the next film in this series.

Broader Concept of Method: Part II—Teachers and Pupils Planning and Working Together. 18 minutes, sound, black and white (McGraw-Hill Book Company).

The class, now organized into committees, make more definite plans, assign responsibilities to various members, outline the kinds of behaviors needed to make the project a success, and carry their activities to successful completion. The teacher acts as a guide and takes positive steps in helping the students get off to a good start and carry their work to completion.

CHAPTER 7

Principles of the Art and Science of Teaching. 47 minutes, two reels, sound, black and white (University of Iowa).

Pupil-teacher planning, observed by a group of student teachers, is viewed in an American history class. Considerable time is given to record the classroom discussion in which objectives were identified, activities were planned, and content was organized.

CHAPTER 8

We Plan Together. 20 minutes, sound, black and white (Teachers College, Columbia University).

An eleventh-grade core class meets with a group of teachers to outline their objectives, plans, and activities for a semester. At intervals, planning committees outline work activities for the whole class, and projects in the form of culminating activities are carried to successful completion. Appraisal of growth toward objectives is shown.

CHAPTER 9

Discussion in Democracy. 10 minutes, sound, color and black and white (Coronet).

Outlines the basic principles and procedures in group discussion. Emphasizes the need for teacher direction in helping students get a worthwhile project started, organize plans for carrying it to completion, and guide the formulation of policies relative to gathering information, presenting information, and using informal discussion procedures to arrive at solution of problems encountered.

Field Trip. 10 minutes, sound, color (Virginia State Department of Education).

Dramatizes the planning, execution, and evaluation of a field trip.

CHAPTER 10

Facts About Projection. 11 minutes, sound, black and white (International Film Bureau).

Dramatizes the need for preparing the class to see a film and also the need for having the projector and room in readiness for use. Operational routines for starting and ending the showing of the 16 mm. film are indicated.

How to Make Handmade Lantern Slides. 22 minutes, sound, color (Indiana University Audio-Visual Center).

Shows how to make handmade lantern slides and indicates the possibilities for use of such slides in many classrooms.

Language of Graphs. 15 minutes, sound, color and black and white (Coronet).

A problem situation is set up related to financing the school paper wherein two students of the staff learn how to construct bar, line, and circle graphs and how to use them to convey information needed to get more money to publish the school paper.

Radio Broadcasting Today. 19 minutes, sound, black and white (March of Time).

Appraises the many kinds of programs, good and bad, which constitute radio today. The film dramatizes the advertising as well as other functions of radio.

Teaching Materials Center. 9 minutes, sound, color (Virginia State Department of Education).

Shows how a teaching materials center serves to make available to teach-

ers a variety of rich materials which may help to make pupil learning more meaningful. The basic principles and organizational procedures for the center might be applied to a school district or to a large school.

CHAPTER 11

How to Read a Book. 10 minutes, sound, color or black and white (Coronet).

Outlines the methods for surveying a book, using library aids to find books, and reading to get specific information.

CHAPTER 12

Artist and Nature. 11 minutes, sound, color (Bailey Films, Inc.).

Discloses sources of inspiration in man's environment and interprets these forms through the eyes of a creative artist.

Young America Paints. 10 minutes, sound, color (Association Films, Inc.).

A film record of the fifth annual exhibition of Young America Paints.

Music in America. 17 minutes, sound, black and white (March of Time).

Surveys many types of American music.

Symphony of Young America. 22 minutes, sound, color (National Music Camp).

Shows rehearsals, concerts, broadcasts, and conductors at work at the National Music Camp, Interlochen, Michigan.

Let's Read Poetry. 10 minutes, sound, black and white (Bailey Films, Inc.).

Class readings by individuals accompanied with screen visualizations of such poems as "Who Has Seen the Wind," "Rain in Summer," and "The Brook Song." A class is taught how to improve the reading of poetry and how to enjoy it.

CHAPTER 13

Children in Trouble. 10 minutes, sound, black and white (March of Time).

The serious waste of human resources in delinquency and crime is shown graphically. A program for prevention which involves utilizing leadership from all the social institutions within a community is dramatized.

Maintaining Classroom Discipline. 15 minutes, sound, black and white (McGraw-Hill Book Company).

Shows how and why organization of the learning situation, the teacher's attitudes toward it, and the teacher's attitudes toward students are the chief determinants of the kind of pupil growth which occurs in the classroom. *Problem Children*. 22 minutes, sound, black and white (Ohio Division of Mental Hygiene).

The shy, withdrawing adolescent and the aggressive, dominating boy are contrasted. The film dramatizes the causes which led to this behavior and suggests kinds of teacher actions which may be helpful in a readjustment program for each. Attention is given to the role of the home, the school, and the community in producing maladjusted adolescents.

CHAPTER 14

Counseling—Its Tools and Techniques. 22 minutes, sound, color or black and white (Vocational Guidance Films).

Situations are dramatized which show the counselor interviewing, using questionnaires, films, tests, etc. The principles which may be followed in conducting a counseling interview and in helping the individual to appraise himself are demonstrated.

I Want to be a Secretary. 15 minutes, sound, black and white (Coronet).

Outlines the aptitudes correlated with success in clerical work. Helps the viewer to appraise his own interests in relation to success in the field.

CHAPTER 14 AND CHAPTER 15

Aptitudes and Occupations. 16 minutes, sound, black and white (Coronet).

Illustrates six fundamental human abilities: mechanical, clerical, social, musical, artistic, and scholastic. Situations are shown wherein the student in conference with the counselor identifies some of his abilities and interests related to occupations. Some of the broad fields of occupations wherein certain kinds of abilities are needed are discussed.

Of Pups and Puzzles. 11 minutes, sound, black and white (Teaching Film Custodians).

This shows how tests which are useful in helping match individuals with jobs have been built and also how they may be used.

Testing Intelligence with the Stanford-Binet. 18 minutes, sound, black and white (Indiana University Audio-Visual Center).

Shows how the Stanford-Binet is administered and explains the meaning of mental age, also method for computing IQ score.

CHAPTER 16

Fight for Better Schools. 20 minutes, sound, black and white (March of Time).

Shows how the citizens of a Virginia community organized themselves into action to secure the kind of buildings, instructional materials, teaching staff, and administrative staff which transformed a politics-ridden, weak program of instruction into one of the best in the nation.

Appendix B: Resource Unit in Health— Tuberculosis

This resource unit, adapted from original work of Fred G. Rhodes, instructor in health education at Colorado State College of Education, may be used in a core, physiology, or health class. The outline follows the Framework for a Unit suggested in Chapter 6.

I. Introduction

- A. Age Level: May be adapted for use in grades 7-14
- B. Length of Time Needed to Carry Out the Unit: 3-8 weeks, 1 hour per day
- C. Relation of This to Other Units and Subjects: to be decided by the teacher with appropriate methods used to clarify the relationship to the students

II. Objectives of the Unit

- A. Understandings: The student understands
 - 1. The extent of tuberculosis in the community, state, and nation
 - 2. Causes of tuberculosis
 - 3. Communicable nature of tuberculosis
 - 4. Methods for detecting tuberculosis
 - 5. Treatment of tuberculosis
 - 6. Effect of nutrition and health habits in the prevention of tuberculosis
 - 7. The local and state program in the detection and prevention of tuberculosis
 - 8. The local and state program in the treatment of individuals with tuberculosis
- B. Skills: The student develops skill in
 - 1. Following these steps in problem-solving: identifies problems,

- gathers information, analyzes information, draws tentative conclusions, applies conclusions
- 2. Reading more rapidly and with greater comprehension
- 3. Writing notes and findings
- 4. Listening and conversing
- 5. Interviewing community persons
- 6. Reading and making graphic materials
- 7. Using the library
- 8. Establishing health habits related to nutrition, activity, rest, and sleep
- 9. Carrying out a schedule of periodic x-ray examinations
- 10. Educating others concerning tuberculosis and related public health problems
- C. Attitudes: The student indicates development of desirable attitudes by
 - 1. Exhibiting genuine concern for his own health
 - 2. Showing interest in studying the disease
 - 3. Exhibiting interest in the health problems of the school and the community
 - 4. Coöperating in carrying out health practices which prevent the spread of communicable diseases

III. Content Outline

A. In Terms of Problems to Be Solved

- 1. How many cases of tuberculosis are reported annually in this community and in this state?
- 2. What are the causes of tuberculosis and how is it transmitted?
- 3. What agencies in the community and in the state are concerned with tuberculosis?
- 4. Does poverty lead to a high tuberculosis rate?
- 5. Which occupations have high tuberculosis rates?
- 6. Does climate affect incidence of tuberculosis?
- 7. What is the relationship between reducing diets and diet fads and tuberculosis?
- 8. What can the boys and girls in this class do to build resistance to tuberculosis and other diseases?
- 9. What can boys and girls in this class do to encourage examinations for the purpose of detecting tuberculosis?
- 10. What are the methods for curing tuberculosis?

11. What can a community do to help the tuberculosis patient who is hospitalized?
 12. What positive things can we do in our school and in our community to stamp out tuberculosis?
- B. Topical Outline of Subject Matter
1. Extent of tuberculosis
 - a. Most common cause of death by illness in the age group, 15–34
 - b. Annually, 60,000 deaths occurred, 1939–1945
 - c. In 1947, 48,064 persons died of tuberculosis
 - d. Tuberculosis has declined by about 80 per cent since 1900
 - e. Estimates indicate that about 500,000 persons have active tuberculosis today
 - f. Estimates place the cost of tuberculosis in 1943 between \$300,000,000 and \$350,000,000, not including loss of income
 2. Causes of tuberculosis
 - a. A germ, tubercle bacillus, discovered by Dr. Robert Koch in 1882
 - b. Four types of tubercle bacillus: Human, bovine, avian, and piscine
 - c. The human and bovine type lead to human infection
 3. Spread of tuberculosis
 - a. Raw milk which carries bovine-type bacillus from infected cattle
 - b. Human-type bacillus spread by an individual with an active case: Sputum, coughing and sneezing, kissing, drinking and eating utensils, bed linens, and dust-laden germs
 - c. Disease is not inherited; infected parents may transmit it to children
 4. Contributing factors which lower resistance
 - a. Malnutrition and unwise dieting
 - b. Inadequate rest and sleep
 - c. Inadequate physical exercise
 - d. Occupations where dust is prevalent
 - e. Dirty and filthy living quarters
 - f. Climatic conditions appear to have little effect on incidence and cure
 5. Detection of tuberculosis
 - . In later stages by these symptoms: Chronic fatigue, loss of

- weight, digestive upset, chronic cough, blood in sputum, loss of appetite, night sweating, and afternoon fever
 - b. In early stages by x-ray of lungs, tuberculin tests—Mantoux Test and Volmer Patch Test—and medical examinations involving laboratory analyses
6. Treatment of tuberculosis
- a. Tuberculosis is curable, especially if detected early
 - b. Rest is a major factor in cure; no specific drug or medicine used
 - c. Lungs or other tissue must heal
 - d. Surgery, especially pneumothorax, or lung collapsing
 - e. Surgery to remove infected tissue
 - f. Nutritious diet
 - g. Mental attitude
 - h. Sanatorium care
7. Control of tuberculosis
- a. Community and state program—discover needs and resources, education, conducting x-ray program, isolation of active cases, control over milk supply, treatment program for active cases
 - b. Personal program—yearly x-ray or tuberculin tests, practice of good health habits, avoidance of active cases

IV. Suggested Activities

A. Initiatory Activities

1. Identify problems to be solved
2. Organize the class into committees to discover the causes of tuberculosis, methods for identification, and methods of treatment
3. Organize the class into committees to learn health agencies which operate in the community
4. Outline the procedures whereby the whole class will participate in the local community tuberculosis campaign
5. Show one or more of the films: *Goodbye, Mr. Germ*, *Lease on Life*, *This is T.B.*, or *Middleton Goes to War*
6. Bring into the classroom a physician or nurse to explain the disease or the community program
7. Listen to a recording of a radio program dealing with the state or community tuberculosis program
8. Dramatize the case history of a tuberculosis patient

9. Administer a pretest of understandings and concepts

B. Developmental Activities

1. Make a class scrapbook of newspaper clippings, magazine articles, and pamphlets on tuberculosis
2. Organize the class into committees to dress the bulletin board and to explain their findings to the class
3. Go to the library to find all the sources of information concerning tuberculosis
4. Organize the class into committees which work with various community agencies in the tuberculosis program
5. Conduct field trips into the community to visit and study (a) the local health department, (b) the local tuberculosis association, (c) the x-ray department of a hospital, (d) a dairy, or (e) a farm at the time of tuberculosis testing and immunization of cattle
6. Invite into the class the editor of a local newspaper to arrange for students' stories to be printed
7. Make posters for school and community display
8. Conduct socio-drama which illustrate the attitudes of persons opposed and in favor of a community program of annual x-rays
9. Conduct discussions of materials read
10. Develop plans for presenting information: Graphs, charts, themes, newspaper articles, radio skits, class dramatizations, etc.
11. Make the plans for the x-raying of all high-school students.

C. Culminating Activities

1. Give an assembly program in which the causes and prevention of tuberculosis are dramatized, a film is shown, or x-raying is demonstrated
2. Prepare a skit to be presented to the PTA or other community groups
3. Distribute posters or other materials in the school and in the community
4. Write themes or give panel discussions on the Christmas Seal Movement, the development of x-ray, the history of tuberculosis, or the community's job in eradicating tuberculosis; publish appropriate materials in the local newspaper
5. Demonstrate x-ray, fluoroscope, and microfilm techniques in detection of tuberculosis

6. Prepare statistical charts showing the cost of hospitalization, rehabilitation, and control of the disease
7. Prepare charts showing the mortality and morbidity rates by age, sex, race, and financial status
8. Make posters illustrating wholesome diet or health practices for adolescents
9. Make posters showing characteristics of occupations which are conducive to the disease
10. Make a recording of student proposals and ideas to be used for informing various community groups

V. Materials and Resources

A. Books and Pamphlets for the Teacher

1. Anderson, Gaylord W. and Arnstein, Margaret G., *Communicable Disease Control*, New York: The MacMillan Company, 2nd ed., 1948
2. Chadwick, Henry D. and Pope, Alton S., *The Modern Attack on Tuberculosis*, New York: The Commonwealth Fund, rev. ed., 1946
3. Joint Committee on Health Problems in Education, *Health Education, a Guide for Teachers*, Washington, D.C.: National Education Association, 4th ed., 1948
4. Pottenger, Francis M., *Tuberculosis and How to Combat It*, St. Louis: C. V. Mosby Company, 2nd ed., 1948
5. Stieglitz, Edward J., *A Future for Preventive Medicine*, New York: The Commonwealth Fund, 1945
6. Yost, Edna and Gilbreth, Lillian M., *Normal Lives for the Disabled*, New York: The MacMillan Company, 1944
7. National Tuberculosis Association, *Building a Community Program for Tuberculosis Control*, 1790 Broadway, New York: National Tuberculosis Association, 1947
8. National Tuberculosis Association, *Chest X-ray Service in Action: A Symposium Describing Group Chest X-ray Services Under Varying Conditions*, 1790 Broadway, New York: National Tuberculosis Association, 1948

Other publications may be obtained from the National Tuberculosis Association or from state and local tuberculosis associations.

B. Movies to Be Investigated (consult the H. H. Wilson Company for distributors)

1. Behind the Shadows
2. Let My People Live
3. Cloud in the Sky
4. Goodbye, Mr. Germ
5. They Do Come Back
6. Another to Conquer
7. Sand in the Gears
8. Middletown Goes to War
9. Contacts

C. Books and Pamphlets for Pupils

1. Dakin, Florence and Thompson, Ella M., *Simplified Nursing*, Philadelphia: J. B. Lippincott Company, 4th ed., 1941
2. Erwin, Grahame S., *A Guide for the Tuberculosis Patient*, New York: Grune and Stratton, Inc., 1946
3. Flick, Ella, *Beloved Crusader*, Philadelphia: Dorrance and Company, 1944
4. Glasser, Otto, *Dr. W. C. Roentgen*, Springfield, Ill.: Charles C. Thomas, 1945
5. Hayes, Edward W., *Tuberculosis As It Comes and Goes*, Springfield, Ill.: Charles C. Thomas, 2nd ed., 1947
6. Holand, Harold (ed.), *A Mirror for Cure-Takers*, Milwaukee, Wisc.: Wisconsin Anti-Tuberculosis Association, 1946
7. Trudeau, Edward L., *Autobiography*, 1790 Broadway, New York: National Tuberculosis Association, 1944
8. Wilmer, Harry A., *Huber the Tuber*, 1790 Broadway, New York: National Tuberculosis Association, 2nd ed., 1943
9. From local, state, and the National Tuberculosis Association:
 - a. How to Kill TB Germs
 - b. How Your Body Fights TB
 - c. Tuberculosis from 5 to 20
 - d. We, the People Fight Tuberculosis
 - e. Why X-Ray?
 - f. Tuberculosis—Basic Facts in Picture Language
 - g. Steps to Safety—The Tuberculin Test
 - h. Everybody's Doing It—Get Your Chest X-ray Now
 - i. Climate and Tuberculosis
 - j. Air and Sunshine

- k. The Low-Down on TB
- l. Why Sleep?
- m. Shall I Hire Them?
- n. Going Home from the Sanatorium

VI. Evaluation Procedures

- A. Take each of the objectives stated as understandings and further define it or add others which are applicable to your situation. Construct a true-false, multiple-choice, or matching test and administer it at the beginning and end of the unit to discover extent of progress in understandings during the unit.
- B. Discuss with the students the skills which they will build. Have each student outline his statement of skills, a rating scale for evaluating his progress, and help him evaluate progress in building them
- C. Keep brief anecdotal records of the attitudes which the students express in their conversations to note change in attitudes
- D. Have students participate in panel discussions and sociodrama. During such participation, rate them on the adequacy of the understandings and attitudes expressed

E. Sample Evaluation

- 1. Items for a true-false test
 - a. Tuberculosis is inherited
 - b. The number of cases of tuberculosis is increasing since 1930
 - c. Pain in the chest is an early symptom of tuberculosis
 - d. New drugs are used to treat tuberculosis
 - e. The home is the best place to care for tuberculosis patients
 - f. Chest x-rays help to cure tuberculosis
 - g. The tuberculin test is widely used in detecting tuberculosis in high school students
 - h. A person with active tuberculosis should be isolated from healthy people

2. Sample check-list

Your friend tells you that he feels tired most of the time, is losing some weight, and has a poor appetite. He coughs a great deal and often complains of headache in the morning. For the first time he made a D in English last semester. Check any of the items which you think are true for him.

- a. I do not worry because I have no sharp pains in my chest

- b. I think I should move to Arizona or some other dry place
 - c. I will not take a chest x-ray because x-rays may cause cancer or lead to high blood pressure
 - d. I am going to rest at noon hour and go to bed at 7:30 instead of 9:00 o'clock
 - e. I cannot have tuberculosis because there is no blood in my sputum
 - f. I cannot have tuberculosis because I have not been near anyone who has it
 - g. I cannot have tuberculosis because my parents do not
 - h. I will tell my parents that I am too tired to go to school
 - i. I will insist upon seeing a doctor and having an x-ray
 - j. I will start taking vitamin pills
 - k. I will quit swimming with my class
 - l. I am sure I have tuberculosis
3. Sample essay items
- a. The father of five children is discovered to have active tuberculosis. He is a farmer and barely makes enough to keep his family. What should he do?
 - b. The star on the basketball team is x-rayed and is found to have active tuberculosis. His parents cannot give him proper medical attention. What should he do?
 - c. What causes tuberculosis?
 - d. How is tuberculosis transmitted?
 - e. How is tuberculosis identified?
 - f. What should a community do to get rid of tuberculosis?
 - g. What should each student do to make sure he does not get tuberculosis?
 - h. What action should a student take if he thinks he has tuberculosis?

INDEX

- Abilities, differences in, 78, 481-482
 general, 435-436
 tests, 428
- Abraham Lincoln High School, San Jose, Calif., 152-155, 315-316
- Academies, 141-142
- Accomplishment, sense of, 247
- Achievement, diagnostic, and aptitude tests, 455-457
 previous, 326-327
- Achievement batteries, 447, 449, 452-454
- Achievement differences, 97-98, 482
- Achievement-level assignments, 273-274
- Achievement levels, reasonable, 383-384
- Act Your Age*, 306
- Activities, and need satisfaction, 40
 and unsatisfied needs, 41-43
 daily lesson planning, 189-191
 group, 106-107
 learning, *see* Learning activities
 modifying, 251-252
 motor, 72-73, 200, 232-234
 unit, 183-184
- Adjustment, social and emotional, 325-326, 428-429
 problems, 41-43
- Administrators, and whole school, 128-129
- Adolescent period, 3-4
 behavior, *see* Behavior
 definition and characteristics, 45-46
 developmental tasks, achieving emotional maturity, 52-53; achieving intellectual maturity, 55-56; building philosophy of life, 56-58; importance of, 376-379; new relations with adults, 50-52; relationships with opposite sex, 49-50; school learning and out-of-school life, 480-481; understand-
- Adolescent period—(*Continued*)
 ing and accepting own physique, 47-49
 diagnosis of adolescent, 401-402
 methods of studying, 58-66; anecdotal records, 63-65; cumulative records, 65; observational case study, 65-66; sociogram, 59-63
- Adult-adolescent relations, 50-52
- Aesthetic behavior, 75-76
 See also Creativity and appreciation
- Affectivity, 355
- Agencies, social, 130
- Aggressiveness, 42
- Agriculture, and use of radio, 314-315
- Aikin, Wilford M., 149-150
- Alberly, Harold B., 151
- Algebra, focusing attention on, 201
- Alternate-choice tests, 461-462, 465
- Alternatives, and freedom, 118-119
- American Council on Education, 23, 319
- American Youth Commission, 23-24, 25
- Anarchic climates, 389
- Anderson, G. Lester, 72
- Anderson, Harold H., 111-112
- Anecdotal records, 63-65
- Anecdotes, and group objectives, 203-204
- Apathetic repressed group, 390
- Apology, forced, 398
- Appraisal, informal methods of, 213-215
 individual student, 435
- Appraisal program, 412-414
 tests, 414-419
- Appreciation, *see* Creativity and appreciation
- Approval, 4, 377-378
- Aptitude tests, 415-416, 428, 456-457
- Aptitudes, general, 435-436

- Arithmetic, individual and group work, 257-258, 262-264
- Arts, 75
language, *see* Language arts
visual, 356-360
- Assembly-line production, 12
- Assignments, 190-191, 203
achievement-level, 273-274
common, 272-273
flexible, 274
text, 293
- Associations, *see* Organizations
- Atlases, 297, 340
- Atomic energy, 120, 121
- Attention, focusing, 198-201, 246
- Attitudes, 56-57, 74-75, 180, 182
and counseling, 423-424
and evaluation, 444
building, 238-243
- Auditory aids, 19
radio, *see* Radio
records and transcriptions, *see* Recordings
television, 318-319
- Authoritarian leadership, 113-114
- Bainter, Fay, 316
- Bar graph, 309-310
- Barrett, James, 240 n.
- Baxter, Bernice, 122-123
- Behavior, 3-4
aesthetic, 75-76
and maturation, 40-41
and unsatisfied needs, 41-43
meeting problems intelligently, 43-44
need satisfaction, 40
origin and cause, 44-45
teacher, analysis of, 122-123
See also Creativity and appreciation; Discipline
- Bell, Reginald, 298
- Belonging, feeling of, 105-106
- Berkeley, Calif., 145
- Biography, study of, 299
- Biological needs, 40
- Birth rates, 14
- Blocks, social, 42-43
- Boston English high school, 142
- Boston Latin grammar school, 141
- Boundary lines, school, 244-245
- Boy-girl relationships, 49-50
- British-style debate, 281-282
- Broad-fields course, 139
- Broad-fields curriculum, 139
- Bryan, William Jennings, 316
- Bulletin board, *see* Display area
- California Council on Improvement of Education, 298
- California State Curriculum Commission, 155-157, 158-160
- California State Department of Education, 298
- "California Statement of Teaching Competence," 31-35
- California Test of Personality, 417-418, 454
- Calisthenics, 479
- Capacity, intellectual, 327-328
- Cardinal Principles of Secondary Education, 22-23, 148-149
- Career days, 429, 436
- Caricatures, 309
- Carnegie Foundation for the Advancement of Teaching, 143-144
- Carney, Elizabeth, 198 n.
- Cartoons, 309
- Case study, observational, 65-66
- Challenges to secondary teachers, 1-9
- Chamber of Commerce, 301
- Change, *see* Social change
- Chapter, surveying, 332-333
- Character tests, 454
- Charts, 457
- Check lists, 467
identifying objectives, 204
- Child-centered curriculum, 140
- Child-centered school, 18
- Children, average number per family, 14
- Churches, visits to, 245
- Circle graph, 310
- Cities, growth of, 13
- Clark, Willis W., 452
- Class period, 137
- Classes, schedule of, 137-138
See also Courses
- Classroom, diagnosis of situation, 401
physical setting, 328-329
- Classroom climate, 388-395
- Classroom instruction, and evaluation,
see Evaluation
guidance aspects, 435-439

Classroom instruction—(*Continued*)

- planning, daily, *see* Daily lesson planning; developmental and culminating, *see* Developmental and culminating activities; initiating, *see* Initiatory activities; overall, 169-174; unit, *see* Unit planning
- Clerical aptitude testing, 416
- Climate, classroom, 388-395
- Cliques, 59, 216-217
- Clubs, 130-131
- Cocurricular activities, 148, 154-155, 427
- College Follow-up Staff, 149-150
- Colleges, and secondary curriculum, 149-151, 163-164
 - and secondary enrollment, 16-17
- Comics, 309
- Commission on Life Adjustment for Youth, 31
- Commission on Secondary School Curriculum, 24-25
- Commission on the Reorganization of Secondary Education, 22-23, 148-149
- Committee of Nine on the Articulation of High School and College, 144
- Committee of Ten, 21
- Committee on College Entrance Requirements, 143-144
- Committee on Correlation of Studies, 145
- Committee on Economy of Time, 145
- Committees, activity, 207-208, 211, 216, 221, 259
 - curriculum, 143-145
 - guidance, 433-434
 - text and reference materials, 279-280
- Common assignment, 272-273
- Communication, 13, 120
- Communism, 124
- Community, and democratic ideals, 125-126, 129-131
 - youth services, 427-428
- Competences, goal achievement, 31-35
- Competitive climates, 391-394
- Completion tests, 461, 465
- Components, identical, 94-95
- Concentration, practice for, 336-337
- Concepts and generalizations, 73-74
- Conceptual learning, 87-88
- Consequences, analysis of, 118-119
- Content, modifying, 251
- Content guide, 183
- Contents, Table of, textbook, 331
- Control standards, 220-222
- Controls, social and emotional, 75, 214
- Coöperation, and group welfare, 112-114
 - teacher-counselor, 425
 - teacher-student, 446
- Coöperative climates, 394-395
- Core, and guidance, 429, 434
 - and visual arts, 360
 - defined, 139
 - developmental and culminating activities, 243-245
 - language arts, 371
 - types of programs, 151
- Correlated course, 139
- Council, guidance, 433-434
- Counseling services, 402, 403, 422-426, 438-439, 483-485
- Courses, defined, 138-139
 - music, 361-366
 - outcomes sought, 261-262
 - patterns and proposals, 140-157;
 - academy, 141-142; electives and tracks, 148; English high schools, 142; experience-centered design, 155-157, 158-160; experimentation since 1918, 148-152; junior high school curriculum, 145-148; Latin grammar schools, 141; national committees, 143-145; subject-centered design, 152-155
 - visual arts, 356-360
 - vocational, 420-421, 434
- Courtesy, teacher, 219-220
- Courts, juvenile, 130
 - and guidance, 431
- Covertly rebellious group, 390
- Crafts, hand, 358-359
- Creativity and appreciation, factors related to, 350-356
 - affectivity, wood, and emotion, 355-356
 - imagination, 354
 - motivation, 351-352
 - physical and mental potentiality, 350-351
 - self-expression, 352-353
 - sensitivity, discrimination, and perception, 354-355

- Creativity and appreciation—(*Continued*)
 skill with materials and tools, 352
 language arts program, 366-372
 music program, 361-366
 visual arts program, 356-360
- Credit, units of, 137
- Critical evaluation, practice for, 337-339
 testing, 459-460
- Critical ratio, 473
- Culminating activities, *see* Developmental and culminating activities
- Cumulative records, 65, 212-213
- Current reading materials, 298-301
- Curriculum, and evaluation, 448
 and guidance specialist, 427
 and teacher, 157-161
 course patterns and proposals, *see* Courses
- defined, 135-136
 investigation methods, 161-164
 statement on, 24-25
 terminology, 137-140
- Custom, and freedom, 116
- Daily lesson planning, 186-194
 evaluation, 193-194
 framework, 187, 192-193
 handling of routine, 188-189
 major activities, 189-190
 outline of materials, 191-192
 starting, 189
 summary and planning for next day, 190-191
 timing lesson, 192-193
- Dalton plan, 264-265, 338
- Dancing, 75, 235-238
- Dating Do's and Don'ts*, 307
- Daydreaming, 437
- Debate, 281-282
- Decker, Donald G., 170-173, 181, 295-296
- Delinquency, 431
- Democratic leadership, 113-114
- Democratic living, 5-6, 104-105, 482-483
 achieving ideals, 121-129; management of whole school, 128-129; related areas of instruction, 123-127; special provisions in school program, 127-128; teacher-pupil relations, 122-123
- Democratic living—(*Continued*)
 ideals, community forces implementing, 129-131; cooperation for group welfare, 112-114; faith in progress, 119-121; intelligence in problem solving, 109-112; respect for unique individuality, 105-109; responsibility for action in free society, 114-119
- Dependency needs, 40
- Department marks, 447
- Depression, 18, 23, 120-121
- Developmental and culminating activities, 184, 225-253
 building attitudes, 238-243
 building skills, 232-238
 building understandings, 227-232
 core class, 243-245
- Developmental sequence, 86-88, 183-184
 continuing motivation, 245-248
 flexibility in carrying out plans, 249-253
 goal reorientation, 248-249
 implementing, 226-227, 478-479
- Developmental tasks, *see* Adolescent period
- Dewey, John, 18
- Dewey decimal system, 341
- Diagnostic tests, 204-205, 456-457
- Diaries, 468
- Dictionaries, 297
 practice in use of, 339-340
 test for use of, 456-457
- Discipline, 4, 18, 375-376
 and classroom climate, 388-395
 mental hygiene viewpoint, disruptive situations, 387-388; importance of developmental tasks, 376-379; interesting activities, 380-381; marking, 385-387; reasonable achievement levels, 383-384; security, 379-380; tests as aids to learning, 384-385; zest for learning, 381-383
 punishment, *see* Punishment
- remedial procedures, 400-406
- Discrimination, 355
- Discussion, informal, 201-203, 275-277
 panel, 282-283
- Display area, and visual arts, 359-360
 graphic materials, 311-313

- Disregard of existing situation, 116-117
- Disruptive situations, 387-388
- Distribution, 12
- Divorce rates, 15, 120
- Domination, teacher, 111
- Douglass, Harl R., 294-295
- Dramatization, formal, 283-284
sociodrama, 284-287
- Dresden, Katharine, 298, 312-313
- Drill, 92, 93-94
- Dropouts, 129-130
- Dykema, Peter W., 361-362
- Economic independence, achieving, 53-55
- Edison, Thomas A., 313
- Education for All American Youth*, 25-26
- Education for life adjustment, 30-31
- Education Index*, 298
- Educational Film Catalog*, 491
- Educational Policies Commission, 25-28, 30, 135
- Efficiency, teaching, investigation of, 99-101
- 8-4 plan, 145
- Eight-Year Study, 149-151
- Electives, 148, 154, 362-363, 370
- Elements, identical, 94-95
- Emotional atmosphere, building, 218-222
- Emotions, achieving emotional maturity, 52-53
adjustment, 326
and behavior, 43-44
and creativity, 355-356
and discipline, 378
and guidance, 430
control, 75, 214
- Encyclopedia of Educational Research*, 298
- Encyclopedias, 297, 340
- Energy sources, 120
- English, initiatory activities, 198-211, 337
- English high schools, 142
- Enrollment, changes in, 16-17
- Enthusiasm, teacher, 218-219
- Equal Educational Opportunities for All Youth*, 23
- Essay tests, 458-460
- Ethical values and principles, 261
- Ethics, professional, 487-488
- Evaluation, and curriculum improvement, 448
and goal reorientation, 248-249
and growth in relation to ability, 446-447
and objectives, 444-445
and qualitative analysis, 447-448
and student progress, 445-446, 485-486
and teacher-student coöperation, 446
changing procedures, 252-253
daily lesson planning, 193-194
informal techniques, 466-470
practice for, 337-339
standardized tests, 447, 449; characteristics, 450-451; types, 451-457
teacher-made tests, 449; essay, 458-460; interpreting data, 470-473; objective, 460-466
unit planning, 178, 181, 185-186
- Evans, Maurice, 316, 354
- Experience-centered curriculum, 155-157, 158-160
- Expression, thought, 260
- Expulsion, 398
- Extracurricular activities, 148
- Failure, and motivation, 83
- Faith in progress, 119-121
- Family life, changing patterns of, 14-16
- Farley, Belmont, 318-319
- Fast learner, 345-346
- Fear, classroom situations, 220
- Federal Communications Commission, 318-319
- Ferrer, Jose, 316
- Field trips, 277-279
- Film strips, 308, 317
- Films, *see* Visual aids
- Financial assistance, 430
- Flexible assignments, 274
- Follow-up, counselees, 425-426
motion pictures, 307
- Force, use of, 110-112
- Formal debate, 281
- Formal-discipline theory, 17-18, 21, 93-94
- Formal dramatization, 283-284
- Fortune*, 300
- Forum, 281
- Fowlkes, John Guy, 128-129

- "Framework for Public Education in California, A," 155-157, 158-160
- Frank, Glenn, 303-304
- Franklin's Academy, 141
- Freedom, defined, 114-115
- factors increasing, 117-119
- factors reducing, 115-117
- Friendly competitive climates, 391-392
- Future Teachers of America, 487
- Gates, Arthur I., 72, 96
- Gehrkins, Karl W., 361-362
- Generalizations, 73-74
- transfer by, 95-97
- Geometry, focusing attention on, 200-201
- Girl-boy relationships, 49-50
- Glass slides, 308, 317
- Goals, and discipline, 381
- and social change, *see* Social change
- competences for achieving, 31-35
- establishing, 83-85
- reorientation, 248-249
- secondary education, 2-3
- statements of, 20-31; American Youth Commission, 23-24, 25; Commission on Life Adjustment Education for Youth, 31; Commission on Reorganization of Secondary Education, 22-23; Commission on Secondary School Curriculum, 24-25; Committee of Ten, 21; Educational Policies Commission, 25-28, 30; National Association of Secondary School Principals, 28-30
- Government, forms of, 124
- Government publications, 301
- Grade lines, crossing, 244
- Graphic materials, 308-313, 333, 457
- Greeley, Col., 146-148, 430
- Group, activities, participation in, 106-107
- characteristics, 215-218
- coöperation for welfare of, 112-114
- formulating objectives, 201-205
- guidance, 426-429
- interaction, 59-63, 215-218
- nature of, 262-264
- projects, and instructional procedures, 19
- Group, activities—(*Continued*)
- relationships, changes in, 13
- status in, 107-108
- Group work, information presenting, 280-287
- types, information securing, 275-280
- when to use, 257-269
- Growth, and evaluation, 446-447
- and marking, 385-387
- Growth potential, 40
- Guidance services, coördinating appraisal program, 412-419
- coördinating group guidance activities, 426-429
- coördinating occupational information and work-experience services, 419-422
- coördinating referral program, 429-431
- directing research, 431-432
- guidance aspects of classroom instruction, 435-439
- guidance committees, 433-434
- providing counseling services, 422-426
- special teachers, 434
- Guide, activities and procedures, 206
- Habits, 44
- study, 327
- Hall, G. Stanley, 18
- Hand crafts, 358-359
- Handicaps, 430
- Hanna, Lavone A., 293-294
- Harvard College, 141
- Hatch Act, 488
- Havighurst, Robert J., 45
- Health, and readiness for study, 324-325
- information, 413
- tuberculosis resource unit, 499-507
- Health of a Nation, The*, 175
- Herbart, J. F., 265
- Hereditary characteristics, 351
- High schools, junior, 19, 145-148
- origin, 142-143
- Hilgard, Ernest R., 84-85
- History, and current reading materials, 300
- informal class discussion, 275-276
- use of radio, 314

- Home, and remedial program, 404-406
 appraisal information, 412-413
 time spent in, 15
- Home arts, 357-358
- Homeroom, 429, 433, 434
- Horizontal organization, 20
- Hostile competitive climates, 392
- How Fare American Youth?*, 23
- How to Read a Book*, 306
- Human Reproduction*, 307
- Hygiene, mental, *see* Discipline
- Ideals, 57-58
 of democratic living, *see* Democratic living
- Identical-elements theory, 94-95
- Illinois, education in, 143
- Imagination, 354
- Immature behavior, 378
- Immigrants All; Americans All*, 316
- Independence, economic, 53-55
- Index, textbook, 332
 use of, test for, 456
- Indiana, education in, 143
- Individual, learning student as, 212-215
- Individual objectives, 209-211
- Individual work, lectures, 269-270
 question-and-answer recitation, 270-272
 supervised study, 272-274
 when to use, 257-269
- Individuality, respect for, 105-109
- Informal appraisal, 213-215
- Informal discussion, 201-203, 275-277
- Initiatory activities, 184, 197-198
 student-teacher, 198-211; developing procedures, 205-209; focusing attention, 198-201; formulating group activities, 201-205; formulating individual objectives, 209-211
 teacher-oriented, 211-222; building good emotional atmosphere, 218-222; learning group characteristics, 215-218; learning student as individual, 212-215
- Insecurity, student, 379-380
 teacher, 220
- Insight, problem solving, 91-93
- Instruction, *see* Classroom instruction
- Instructional films, 491-498
- Instructional methods, changes in, 17-19
- Integrated course, 139, 145
- Integration, teacher, 111-112
- Intellectual capacity, 327-328
- Intellectual maturity, achieving, 55-56
 investigating, 97, 98-99
- Intelligence, and meeting problems, 43-44
 and solution of problems, 109-112
- Intelligence tests, 418-419, 454-455
- Interaction, group, 59-63, 215-218
- Intercultural education, 124-125
- Interest, and discipline, 380-381
 and study methods, 329
- Interests, 74-75, 428
- International Index to Periodicals*, 342
- Internship, 486
- Interviews, evaluation, 468
- Introductory statement, 179
- Inventories, personality, 416-418
 vocational interest, 414-415
- Iowa Every-Pupil Tests of Basic Skills, 456-457, 462-463
- Isolates, 59, 216, 217
- James, William, 18
- Jensen, Dr. Herbert, 491
- Joint Committee on Educational Research, 319
- Joint Committee on Educational Television, 319
- Judd, Charles H., 18, 96
- Junior college, 20
- Junior high school, 19, 145-148, 370-371
- Juvenile courts, 130
- Kalamazoo case, 142
- Kerns, LeRoy, 229 n.
- Kilpatrick, W. H., 266
- Kinney, Lucien, 298, 312-313
- Krug, Edward A., 135, 157-161
- Kuder Preference Record, 414-415
- Labor unions, 12, 131
- Laissez-faire leadership, 113-114, 378, 389
- Language arts, 75, 139
 creativity and appreciation, 366-368
 literature, 368-370
 problems in instruction, 370-372
- Latin grammar schools, 141

- Leaders, group, 59, 216
- Leadership, types of, 113-114, 378, 389
- Learner, fast, 345-346
 - slow, 343-345
- Learning activities, 6-7
 - and developmental sequence, 86-88
 - and differences in kinds of abilities, 78, 481-482
 - and differences in readiness, 78-80
 - and insight in problem solving, 91-93
 - and motivation, 81-86
 - and practice, 88-91
 - and transfer of training, 93-97
 - investigation procedures, 97-101
 - organizing, *see* Classroom instruction
- Learning process, 4-5, 18
 - characteristics, 71-72
- Learning products, 72-77
 - aesthetic types of behavior, 75-76
 - concepts and generalizations, 73-74
 - motives, interests, and attitudes, 74-75
 - motor activities, 72-73
 - social and emotional controls, 75
 - techniques of problem solving, 76-77
- Lectures, 269-270
- Lee and Thorpe vocational interest inventory, 415
- Lesson planning, *see* Classroom instruction
- Library, practice in use of, 341-342
- Life, 300
- Life adjustment, education for, 30-31
- Life philosophy, building, 56-58
- Line graph, 310
- Lippitt, Ronald, 112-114
- Listening, 260-261
- Literary expression, 366-368
- Literature, appreciating, 368-370
- MacLeish, Archibald, 316
- Magazines, 298-300
- Maladjustment, 436-438
- Management, whole school, 128-129
- Manuals, teacher, 295-296
- Maps, 310-311
 - reading test, 456
- Marks, and evaluation, 449-450
 - and growth, 385-387
 - deportment, 447
- Marriage, and family life, 14-15
- Mass punishment, 398
- Massachusetts, education in, 141, 142
- Mastery needs, 40
- Matching tests, 464-465
- Matching Youth and Jobs*, 23
- Materials, skill in use of, 352
- Materials and resources, adapting, 252
 - auditory, *see* Auditory aids
 - outline of, 178, 185, 191-192
 - reading, *see* Reading materials
 - sources, 317-318
 - text and reference committees, 279-280
 - visual, *see* Visual aids
- Maturation, and behavior, 40-41
- Maturity, and classroom climate, 389
 - emotional, 52-53
 - intellectual, 55-56, 78-79; investing, 97, 98-99
 - physical, 79-80
- Mean score, 472
- Measuring Intelligence*, 98
- Median score, 472
- Meeder, Gerald, 240 n.
- Meeker Junior High School, Greeley, Col., 146-148
- Memorization, 17-18, 93-94
- Memory of unrelated facts, tests for, 98
- Mental-faculty theory, 17-18, 21, 93-94
- Mental hygiene, *see* Discipline
- Mental maturity, *see* Intellectual maturity
- Mental Measurements Yearbook*, 298, 451-452
- Mental potentiality, 350-351
- Merrill, Maud A., 98
- Michigan, education in, 142
- Mills, Hubert H., 294-295
- Mood, 355-356
- Mooney Problems Check List, 454
- Morale, 4
 - and punishment, 395-400
- Morrison method, 265-266, 338
- Motion pictures, *see* Visual aids
- Motivation, 81-86
 - continuing, 245-248
 - creativity and appreciation, 351-352
 - establishing goals, 83-85
 - knowledge of progress, 85-86
 - rewards and punishment, 81-83
 - success and failure, 83

- Motives, 74-75
 Motor activities, 72-73, 200, 233-234
 Multiple-choice tests, 462-464, 465
 Music, 75
 appreciation, 240-243
 program, general courses, 363-364;
 music in many classes, 365-366;
 special areas in instruction, 362-363
 National Association for Education by Radio, 319
 National Association of Chief State School Officers, 319
 National Association of Educational Broadcasters, 319
 National Association of Secondary School Principals, 28-30, 135, 175 n.
 National Association of State Universities, 319
 National Council for the Social Studies, 175 n.
 National Education Association (NEA), 12, 319
 National Education Association Committee of Ten, 21
 National Education Association Educational Policies Commission, 25-28, 135
 National Education Association *NEA Journal*, 318-319
 National Education Association Professional Ethics Committee, 487-488
 National Education Association Research Division, 16-17
NEA Journal, 318-319
 Needs, and use of intelligence, 43-44
 satisfying, 40
 unsatisfied, 41-43
 Neural processes, 4
 New England, education in, 141-142
New York Times Index, 342
New York Times Magazine, 300
 Newspapers, 298-300
Newsweek, 300
 Nightingale, Florence, 316
 North Central Association, 24
 Objective tests, 460-466
 Objectives, and evaluation, 444-445
 group, 201-205
 Objectives—(*Continued*)
 individual, 209-211
 modifying, 250-251
 school, 259-261
 unit, 179-182
 Observational case study, 65-66
 Occupational information, 420, 436
 Organization, changes in, 19-20
 Organizational ability, testing, 459
 Organizations, community, 130-131
 professional, 12, 486-487
 Originality, 353
 Overstimulation, 79
 Paintings, 309, 318
 Panel discussion, 282-283
 Paragraph meaning, practice for, 334
 Parents, relations with adolescents, 50-52
 Part-time employment, 421, 430
 Participation, group, 106-107
 Peary, Adm. Robert E., 316
 Pennsylvania, education in, 141
 Perception, 355
 Perfectionism, 383
 Period, class, 137
 Periodicals, 298-300
 Permissive interview, 468
 Personality, development of, 3-4
 of teacher, 218-220
 Personality inventories, 416-418
 Personality tests, 454
 Philosophy of life, building, 56-58
 Physical arrangements, classroom, 328-329
 Physical condition, and readiness for study, 324-325
 Physical maturity, 79-80
 Physical potentiality, 350-351
 Physique, adolescent, 47-49
 Pictures, 309
 Pintner General Ability Tests, 454-455, 463
 Pius XI, Pope, 316
 Planning, *see* Classroom instruction
Planning in Democracy, 175
Policies for Education in American Democracy, 26-27
Popular Science, 300
 Posters, 309
 Potentiality, physical and mental, 350-351

- Practice, 88-89
 analysis of procedures, 189-190
 functional limits, 91
 investigating, 98
 kind of, 89
 reading, 333-339
 time distribution, 89-90
 whole or part skills, 90-91
- Preface, textbook, 331
- Preplanning, *see* Initiatory activities
- Prestige, teaching, 7-9
- Previewing, textbook, 331-332
- Previous achievement, 326-327
- Principles, ethical, 261
- Private groups, reading materials from, 301
- Privilege, loss of, 398
- Problem solving, 338
 insight in, 91-93
 intelligence rather than force in, 109-112
 techniques, 76-77, 266-267
- Production, assembly-line, 12
- Products, learning, *see* Learning products
- Professional organizations, 12, 486-487
- Progress, faith in, 119-121
- Progress, knowledge of, 85-86, 247
- Progressive Achievement Tests, 452-453, 462
- Progressive Education Association, 149
- Project method, 266, 338
- Projection, maps, 311
 visual aids, 306-307, 308
- Prosser, Dr. Charles A., 30
- Psychiatrist, 430
- Psychologist, 430
- Puberty, 41, 46-49, 55
- Public health service, 430
- Public relations programs, 126
- Punishment, 4, 81-83, 388
 criteria, 396-397
 forum, 398-399
 severity, 399-400
 time for, 397-398
- Punitive competitive climates, 392-394
- Purposeful learning, 445-446
- Qualitative evaluation, 447-448
- Question-and-answer recitation, 270-272
- Questionnaires, *see* Check lists
- Quillen, I. James, 293-294
- Radio, and democratic ideals, 131
 program listings, 317
 uses, 313-316, 364
- Radioactivity, 300
- Range, test, 471
- Rating scales, appraisal, 213-215
 evaluation, 468-470
- Rational thinking, 259-260
- Reader's Guide to Periodical Literature*, 342
- Readiness, learning activity, 78-80
- Reading, remedial, 299-300
 study methods, *see* Study methods
See also Language arts
- Reading ability, 260
- Reading materials, current, 298-301
 student workbooks, 296-297
 teacher manuals, 295-296
 textbooks, 291-295
See also Reference materials
- Recall, testing, 459
- Recitation, question-and-answer, 270-272
- Recordings, as control measure, 221
 classwork, 200
 panel discussion, 283
 sources, 318
 subject areas, 316
- Records, anecdotal, 63-65
 cumulative, 65, 212-213
- Reference materials, 297-298
 practice in use of, 340-341
 study committees, 279-280
 test for use of, 456
- Referral, 429-431, 436-438
- Reliability coefficient, 466
- Religion, 245
- Remedial procedures, 400-406
- Remedial reading, 299-300
- Reorientation, goal, 248-249
- Repressed climates, 389-390
- Research, guidance, 431-432
- Resource unit, 175-176
 health (tuberculosis), 499-507
- Resources, *see* Materials and resources
- Respect for others, 261
- Responsibility for actions, 119
- Revised Stanford-Binet Scale, 418, 454, 455, 468

- Rewards, 81-83, 247
Rhodes, Fred G., 499
Rogers, Will, 316
Roosevelt, Theodore, 316
Routine, daily planning of, 188-189
Rural families, 13, 14
- Sands, Lester B., 296-297
Schedule of classes, 137-138
School boundary lines, crossing, 244-245
School objectives, 259-261
Science, activities procedure, 206-207
 developmental and culminating activities, 229-232
 focusing attention on, 200
Science Digest, 300
Science News Letter, 300
Scientific Monthly, 300
Scope, curriculum, 138
Seating, 199-200, 271, 277, 325
Security, feeling of, 108-109, 379-380
Self-expression, 352-353, 458-459
Self-measurement, 86
Self-realization, objectives of, 26-27
Sensitivity, 354-355
Separate subject, 138
Sequence, curriculum, 138
Severity, punishment, 399-400
Sex characteristics, 47-49
Shyness, 437
Singing, 364
Single subject, 138
Situational characteristics, and study methods, 328-330
6-3-3 plan, 145
Skills, and evaluation, 444
 and practice, 88-91
 building, 232-238, 261-262
 learning activity, 6-7, 78, 180
 materials and tools, 352
 motor, 72-73, 200, 261
 social, 181-182, 261, 428-429, 445
Slavery, 115-116
Slides, glass, 308, 317
Slow learner, 343-345
Smith-Hughes Act, 23
Social adjustment, 325-326
Social agencies, 130
Social blocks, 42-43
Social change, 11-20
 patterns of family life, 14-16
 Social change—(*Continued*)
 patterns of secondary education, 16-20
 urbanization of society, 12-13
Social controls, 75, 214
Social needs, *see* Needs
Social skills, 181-182, 428-429, 445
Social studies, 139, 484
 textbook use, 293-294
Social validity, 180
Sociodrama, 284-287, 371
Sociogram, 59-63, 216, 325, 445
 choice diagram, 62
 tabulation form, 61
Specialization, job, 12-13
Special services, school program, 127-128
Spelling, 479
Square dancing, developmental and culminating activities, 235-238
SRA Clerical Aptitudes Test, 416
Standard deviation, 472
Standard error, 472-473
Standards, control, 220-222
Stanford-Binet Scale, 418, 454, 455, 468
States, and curriculum, 162-163
Statistical procedures, test data, 470-473
Status, group, 107-108
 teaching, 7-9, 486-489
Steffy, Doris, 235 n.
Stolz, Herbert R. and Lois M., 48
Strong vocational interest inventory, 415
Student workbooks, 296-297
Study, supervised, 272-274
Study and work methods, fast learner, 345-346
 reading, 330-343; locating information, 339-343; practice methods, 333-339; understanding textbook, 331-333
 readiness for study, 324-328
 situational characteristics, 328-330
 slow learner, 343-345
Subject, separate, 138
Subject-centered curriculum, 139, 152-155
Subject lines, crossing, 243-244
Subject matter, outlining, 191-192

- Success, as motivation, 83, 247-248
 Success experiences, 439
 Summary, daily activities, 190
 Superintendent of Public Documents, 301
 Supervised study, 272-274
 Supplementary texts, 297
 Survey, chapter, 332-333
 Swimming, 479
- Table of Contents, textbook, 331
 Tables, 457
 Teacher manuals, 170-171, 181, 295-296
Teacher's Manual to Accompany How and Why Explorations, A, 170-173, 181, 295-296
 Teachers, and curriculum, 157-161
 and guidance, *see* Guidance services
 and study methods, 330
 behavior, analysis of, 122-123
 challenges to, 1-9
 conduct, 488-489
 method preferences, 264-269
 personality, 218-220
 See also Classroom instruction
 Teaching unit, 176-178
 Technological advances, 12, 19, 119-121
 Television, 313, 318-319
 Ten Imperative Educational Needs of Youth, 26, 28-30, 135, 162, 180, 259, 261, 268, 448, 480
 Tension, 41-43, 71
 Terman, Lewis M., 98
 Tests, appraisal, 414-419
 as aid to learning, 384-385
 changing procedures, 252-253
 diagnostic, 204-205, 456-457
 evaluation, *see* Evaluation
 Textbooks, 291
 selecting, 292-293
 study committees, 279-280
 understanding, 331-333
 use, 293-295
 Texts, supplementary, 297-298
 Thinking, rational, 259-260
Third Mental Measurements Yearbook, The, 298, 451-452
 Thorndike, Edward L., 18
 Tiegs, Ernest W., 452
- Time*, 300
 Time, Inc., 298
Times Index, New York, 342
Times Magazine, New York, 300
 Timing, daily lesson, 192-193
 Tools, skill in use of, 352
 Topic analysis, 334-335
 Tracks, 148
 Tradition, and freedom, 116
 Transcriptions, 316, 318
 Transfer theories, 93-97
 formal discipline, 17-18, 21, 93-94
 generalization, 95-97
 identical elements, 94-95
 Transportation, 13, 120
 Tuberculosis resource unit, 499-507
 Tyler, Ralph, 149
 Typing, focusing attention on, 200
 formulating individual objectives, 209-210
- Understandings, 180-181
 and counseling, 424
 and evaluation, 444
 and study methods, 329-330
 building, 227-232
 UNESCO Week, 342
 Unions, 12, 131
 Unique individuality, respect for, 105-109
- Unit meaning, practice for, 334-335
 Unit planning, activities, 183-184
 characteristics of units, 174-175
 content guide, 183
 evaluation, 178, 181, 185-186
 health unit (tuberculosis) 499-507
 introductory statement, 179
 objectives, 179-182
 outline of resources and materials, 185
 types of units, 175-178
U.S. Census Reports, 298
 Units of credit, 137
 Unrelated facts, memory of, 98
 Upgrading, teaching profession, 486-489
 Urbanization of society, 12-13
- Validity, social, 180
 Values, 58, 261, 489-490
 Verbalized communication, 73-74

- Vertical organization, 19-20
 Visual aids, 19
 film strips and glass slides, 308, 317
 graphic materials, display area, 311-313; graphs, 309-310; maps, 310-311; posters, pictures, and cartoons, 309
 motion pictures, follow-up, 307; instructional films, 491-498; preparation for showing, 306-307; selection, 305-306; silent, 304-305; sound, 303-304; sources, 317
 uses, 302
 Visual arts, 75, 356-360
Vital Speeches, 300
 Vocabulary, learning, 86-87
 practice for, 335-336
 Vocational courses, 420-421, 434
 Vocational interest inventories, 414-415
 Vocations, 22-23, 25
Voices of Yesterday, 316
 Voting, 126

 Wechsler-Bellevue test, 418
Weekly News Review, 300

 Welles, Orson, 316
 White, Ralph K., 112-114
 Whole school, democratic management, 128-129
 Will of others, and freedom, 117
 Wisconsin, education, in, 143
 Withdrawal, 42
 Women's Christian Temperance Union, 301
 Work, *see* Group work; Individual work; Study and work methods
 Work experience, 421-422
 Work methods, appraising, 215
 Work-Study Skills Test, 456-457, 462-463
 Workbooks, student, 296-297
 Wrightstone, J. Wayne, 457

 Year units of credit, 137
 Youth services, 427-428
Youth Tell Their Story, 23

 Zest for learning, establishing, 381-383

